American Aviation

25c — *The News Magazine of Air Transportation* — Aug. 15, 194

A Shocking Weakness

THE Berlin emergency has proved as clearly—and almost as forcefully—as great a glaring weakness in our air defense establishment as Pearl Harbor demonstrated our lack of preparedness.

The Air Force has been appallingly and, considering the lessons learned during the war, inexcusably negligent in planning for military air transport.

by W. W. P.

This country voted a two billion dollar defense program and only the smallest kind of trickle of this program is going for air transport. It is a shocking story in the light of World War II experience and in the light of two air policy board investigations and reports.

The Air Force entered World War II with not a single four-engined transport airplane. Not even any on order. Top Army brass wanted transport airplane production stopped. Top brass even ridiculed the idea that a DC-4 could fly the ocean. In a matter of months the force of events (certainly not brains) brought about a substantial war-time production of essential transports. But has any lesson been learned?

In words much better phrased than we could supply, Gill Robb Wilson has written some columns in the New York *Herald Tribune* that we hope have been read in the Pentagon.

The Berlin surface blockade, he wrote recently, has revealed "both quantitative and qualitative lack of military air transport in the defense establishment of the United States.

"During the last war we found that at least 10 per cent of our tactical aircraft should be cargo planes. Even at that, the ratio of transport planes in the military services has slipped to 5 per cent, and while the Berlin situation can be met by scavenging cargo craft from other operations, the air logistic ratio in the security forces still is not healthy.

"Reasons for this basically weak situation are several. In the first place air transport has never psychologically been accepted as a component of combat aviation. This will be denied all over the lot but is none the less the case. It would not matter if the traditional pattern of security doctrine were to prevail in the air age, but the converse is true. Whatever another conflict might prove to be, it fundamentally would be a battle of air transport.

(*Turn to page* 8)

Twenty Years in Traffic

Merrill F. Redfern, for 10 years executive secretary of the Air Traffic Conference of the Air Transport Association, has passed his twentieth year in airline traffic work. He joined National Air Transport, predecessor to United Air Lines, in 1928. In point of service the oldest employee of ATA, Redfern is also secretary of the parent organization.

REFERENCE COPY *In this Issue*

CAB Cracks Down on Large Irregular Carriers 13

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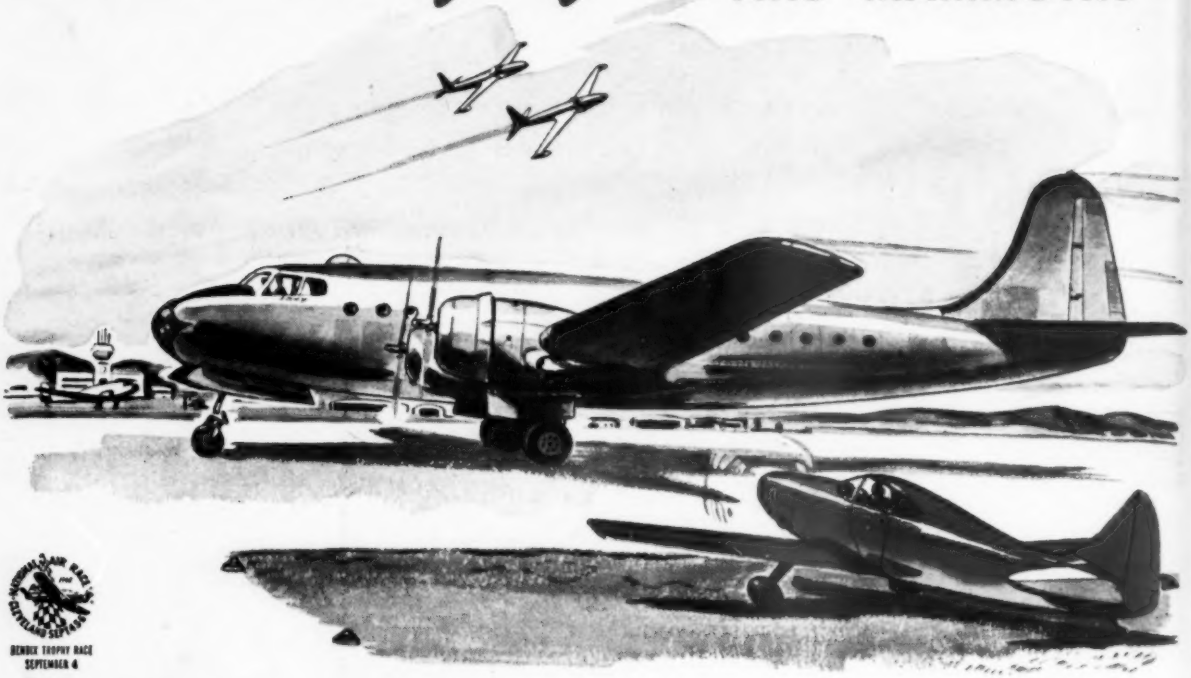
Military Services Lacking In Air Transport 20

MANAGEMENT SALES OPERATIONS

The Pulse of Life— FOR MIDGETS, JETS AND MAMMOTHS



BENDIX TROPHY RACE
SEPTEMBER 4

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Sleek personal planes speeding on myriad errands, jets streaking across the sky, gigantic transports spanning the continent—in fact, fine aircraft of all sizes rely on the efficiency of Bendix-Scintilla* Ignition Equipment. For leading engine manufacturers and airlines have long known that, by any test of quality, performance and economy, Scintilla stands alone. All types of planes, flying in every kind of weather, are logging more and safer hours thanks to dependable Bendix-Scintilla Ignition Equipment.

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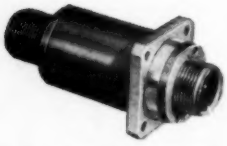

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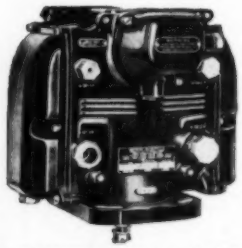
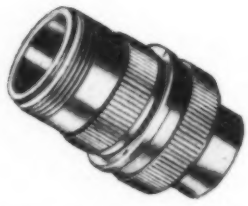


Bendix-Scintilla magnetos are built for both low and high tension aircraft ignition systems that are performance proven on planes of every type and size.



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FORTNIGHTLY REVIEW

CAB Checks Irregulars: CAB's expected crackdown on large irregular passenger carriers was started Aug. 6 when it opened an investigation into practices and activities of these carriers and announced that no letters of registration would be issued on applications filed after that date. (Page 13)

Northwest to Hawaii: CAB decision has awarded a five-year certificate to Northwest Airlines to operate between co-terminals Seattle-Portland and Honolulu. Applicants turned down were Pan American Airways, Matson Navigation Co., and Trans-ocean Airlines. (Page 14)

Military Needs Transports: Despite wartime experience in the basic value of air transport, the military services are sadly lacking in adequate transport fleet at this time. Worse still, less than 100 are on order through fiscal 1949. (Page 20)

Tomorrow's Traffic Control: Detailed requirements for carrying out RTCA's long-range plan for air traffic control, are now being disclosed for the first time. (Page 25)

Making Consolidation Pay: Continental Air Lines and Braniff Airways have already proved that consolidation of station services can work at small stations, with economy and efficiency. Pooling of ground services need not handicap competitive selling. (Page 32)

•

Only 2,000 Military Planes This Year

Production of military aircraft in calendar 1948, under the supplemental national defense appropriation act, may be expected to approximate the 2,000 unit level, according to Capt. Leland D. Webb, v.p. and western regional manager of Aircraft Industries Association. In terms of weight, this means between 20 and 22 million pounds of airframe, and production will not exceed 50 million a year until 1950, he said. Industrial capacity of the aircraft industry itself was said to be sufficient, but facilities of industries which supply parts and accessories are heavily involved in civilian production.

Many essential materials are in scarce supply, as are engineers and other highly skilled craftsmen. Employment in West Coast companies, including two affected by strikes, totaled 70,914 on July 1, compared with 81,140 at end of 1947, and 82,063 on April 1.

AF Engine Procurement Set at $367,000,000

Aircraft engine procurement of the Air Force during fiscal 1949 was announced at $367,000,000, chief engine purchases being: from Pratt & Whitney, 1,679 R-4360 Wasp Majors; from Allison, 2,070 J-33 (I-40) jet engines and 1,125 J-35 (TG-180) jets; from Wright Aeronautical, 357 R-1300 (Cyclone 7) and 229 R-1820 (Cyclone 9). Also on order are "a substantial quantity" of the new General Electric J-47 (TG-190) 5000-lb. thrust jet engine. The total number of J-47's to be ordered is still indeterminate because AF has not decided which planes it will power.

P & W Engine Prices Go Up 10%

Pratt & Whitney has increased list prices on engines and parts. The increases are not uniform but are said to average about 10%. New listing shows: R-985, $9,800; R-1340, $11,600; R-1830, $21,600; R-2000, $28,550; R-2800, $39,200; R-4360, $70,400.

(Turn to page 6)

AMERICAN AVIATION

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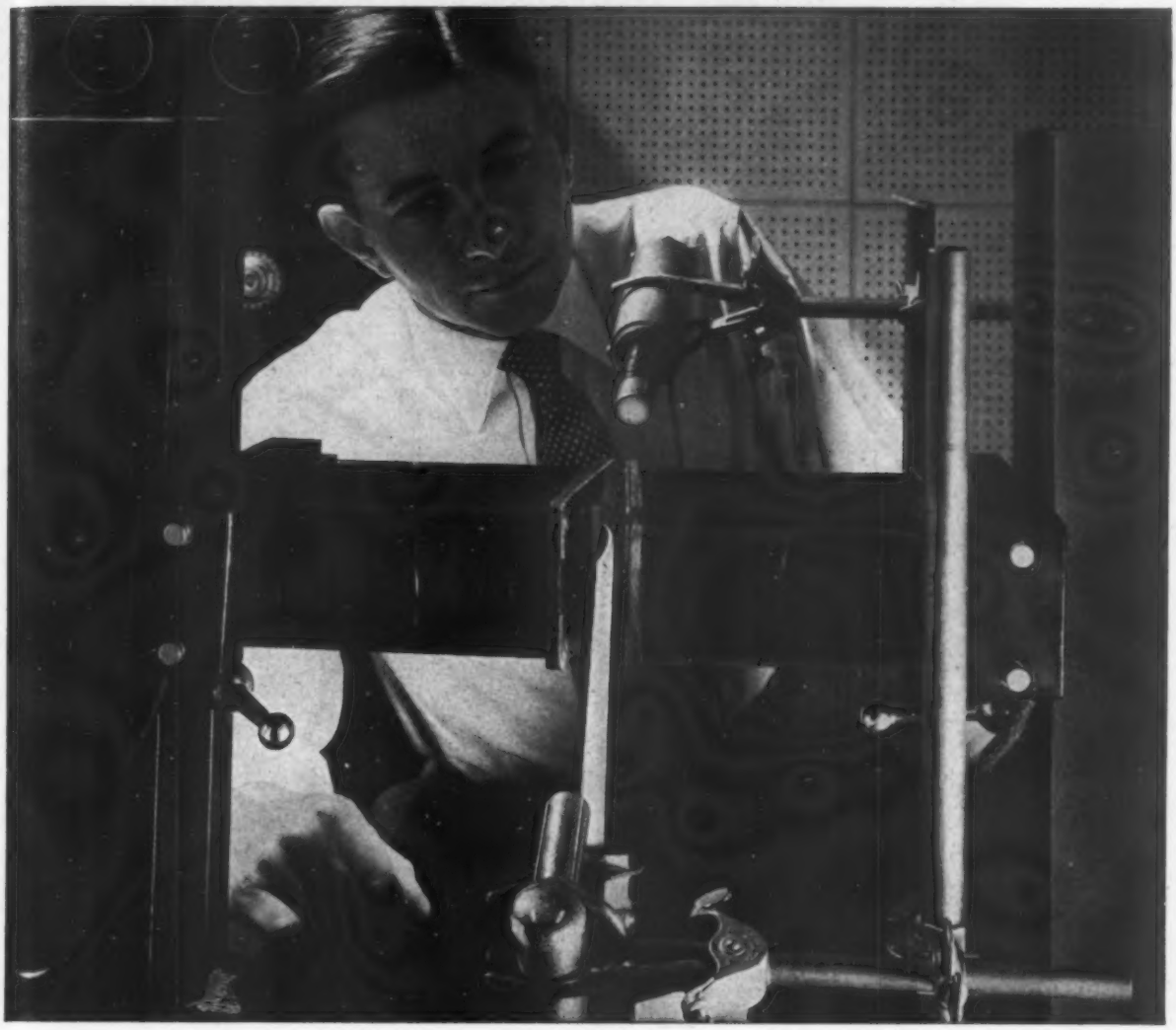


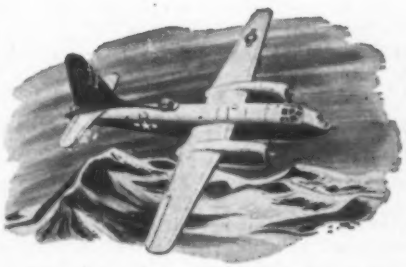
SHAKING THE TRUTH OUT OF A TURBINE BLADE

▸ Here a pair of electro-magnets is "shaking the truth out of a turbine blade." It is being *shaken* in this laboratory test to determine its true natural vibration frequencies—the dangerous frequencies that exist when a very small force causes a large deflection.

▸ The blade is oscillated by high frequency magnetic impulses. As the speed of the magnet excitation is increased, the blade is made to vibrate at its various natural frequencies. A photo-electric cell serves to locate these frequencies precisely, while a measuring microscope reveals the exact amplitude of each.

▸ Modern research such as this determines blade stamina in a much shorter time than would otherwise be possible and provides accurate data from which engineers can design turbine blades and many other vital aircraft engine parts that do not possess harmful vibration characteristics.

▸ Another example of the painstaking research behind the development of Wright aircraft turbine and reciprocating engines.



POWER FOR AIR PROGRESS

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A DIVISION OF CURTISS-WRIGHT FIRST IN FLIGHT

FORTNIGHTLY REVIEW

(CONTINUED FROM PAGE 4)

AF Changes Combat Overhaul Policy

In the future all overhaul and modification work on Air Force combat aircraft (bombers, fighters and reconnaisance planes) will be done by Air Materiel Command depots, rather than by commercial maintenance companies on contract. Decision was reached by AF after study of costs which revealed that AMC could, in most cases, complete an entire modification job, including labor and materials, for the amount that commercial companies were charging for labor alone. Military security was a secondary consideration. Navy's Bureau of Aeronautics has been doing its own modification work for some time.

The decision cost Douglas Aircraft Co., the Glenn L. Martin Co., and Bell Aircraft Corp. extensive modification contracts. These companies, under former system, would have received contracts for modernization of a large number of Boeing B-29's.

Notes in the News:

Initial flight tests on the **Hiller 360 helicopter** are being started and Stanley Hiller, Jr., president of United Helicopters, Inc., hopes to complete requirements for CAA approval within 60 days. Production is slated for next spring, with craft now planned to sell under $20,000 . . . Price of the four-place **Ryan Navion** has been increased to $9,985 f.a.f. San Diego. An increase of $240 last May had raised the previous cost to $8,990 . . . **Civil aircraft** in U. S. increased by almost 15,000 in past year, while **airports** were increased almost 1,000, according to official CAA figures. Report reveals that as of July 1, civilian planes totaled 97,743, compared with 83,571 on same date last year; airports recorded with CAA totaled 6,210 compared with 5,251 a year ago.

Names in the News:

CAB Chairman Joseph J. O'Connell has been appointed by President Truman as chairman of the Air Coordinating Committee, a position which has been vacant . . . First annual awards of National Air Council for aviation research and experiment by members of U. S. Air Force and Navy air arm went to **Rear Adm. Theodore C. Lonnquest,** assistant chief, Bureau of Aeronautics for research and development, and to **Col. James F. Gillespie,** recently-retired chief of the AF all-Weather Flying Division . . .

International

U. S., Britain to Confer on Standards

U. S. and British government aviation officials will confer informally on Aug. 23 in Washington on the future use of the Douglas DC-3, DC-4 and other types in international air carrier operations in foreign countries. A holdover from the Geneva ICAO Assembly, the conference will deal principally with proposed modification of Article 41 of the Chicago convention which prohibits retroactive application of ICAO airworthiness standards to aircraft types already in use.

Effort will be made to reconcile U. S. and British views to gain some unity on this question between the two nations when the next ICAO Assembly meeting is held. The British at Geneva supported modification, possibly deletion entirely, of Article 41, holding that unless older types of aircraft are forced into retirement through regulations which require them to conform to newer standards, manufacturers would lose much of their incentive to build new types.

Both airline and aircraft manufacturing industry in U. S. favor keeping the article in effect, in belief that operating economies involved will take care of the old planes in due time. U. S. civil aviation authorities are expected to support the industry position, although the overall U. S. stand has not been entirely consistent. One factor strongly favoring the U. S. position appears to be that safety in operation of the older planes is not of immediate concern.

BOAC Simplifies Its Organization

British Overseas Airways Corp. has streamlined its organization into two divisions, Eastern and Western. Vernon Crudge, formerly manager of the Atlantic division which encompassed principally the North American Continent, becomes manager of the Western Division which covers the entire area westwards from London to Australasia. J. W. S. Brancker, who has been manager of the eastern division, will head the new Eastern Division comprising the old African, Middle East, and Eastern divisions, encompassing the entire area eastwards from London to Australasia and Japan.

Balchen Returning to U. S. Air Force

Bernt Balchen, who resigned recently as co-president of Norwegian Air Lines (DNL) and as managing director of the Norwegian branch of Scandinavian Airlines System, has volunteered to return to active duty with U. S. Air Force, in which he has held reserve rank of colonel. His position as managing director of DNL will be filled by Maj. Gen. Hjalmar Riiser-Larsen.

The DNL presidency has not been filled, although Per M. Bache, who served as co-president with Balchen, is believed to have the inside track.

136 Dove Transports Delivered

A total of 136 de Havilland Dove feeder transports have been delivered to date, 46 to scheduled airlines, 90 to governments, charter companies, oil firms, private owners and industrial users. Airlines using Doves include: East African Airways, 4; Central African Airways, 6; South African Airways, 2; Iraqi Airways, 3; Airlines (WA) Ltd., 2; BOAC, 2; Sabena, 3; Airways (India) Ltd., 3; Eagle Air Lines (Iran), 3; Sudan Airways, 4; CFL (Belgian Congo), 3; West African Airways, 9; SATA (Azores), 2.

Foreign Air Briefs:

Brazilian government has indicated that beginning Jan. 1, 1949, **landing fees** will be collected on all government-owned airports. The government, which owns practically all good airports in the country, once attempted to collect landing fees but abandoned the plan due to precarious financial condition of Brazilian airlines and inadvisability of collecting from foreign companies alone . . . **British European Airways** is converting its DC-3's from 21 to 28 seats as economy move which will permit 25% reduction in number of aircraft used. Converted planes will be flying by end of summer . . .

The four-engined NC 211 Cormoran, giant French cargo plane built by the Societe Nationale de Constructions Aeronautiques du Centre, (SNCAC), crashed July 20 on its first test flight at Villacoublay Airdrome, near Paris, killing all five crew members. The Cormoran was France's largest plane, designed to carry payload of 13 tons or 131 passengers. The French Air Force has ordered 20 of the transports.

Britishers are flocking to the Science Museum, South Kensington, London, to get a final view of the **Wright Brothers' Kitty Hawk** before the famous plane is shipped to Washington to be set up in its permanent home. Since it won't arrive in Washington until December, it will be on view in London for a little while.

PIONEER FLIGHT PATH CONTROL

YOU'VE SEEN THIS AD BEFORE—we repeat it in salute to the CAA whose ever progressive directorship of civil aviation has sponsored the stepping stone to flight despite the weather—the Instrument Landing System, upon which is based the Flight Path Control System for fully automatic landing approaches—the combined systems to be demonstrated in a series of "no hands" landing approaches on a regularly scheduled basis, regardless of weather, at International Air Exposition, Idlewild Airport, July 31 through August 8.

The ability to bring in every scheduled flight automatically, accurately, every time—the ability to fly a range automatically, unerringly, all the way—these advantages are bound to mean more exact airline operation. And that is just what Pioneer* offers in its new PB-10 Automatic Pilot with Flight Path Control. Utilizing the established C.A.A. instrument landing system beams, this Control flies the airplane on a smooth, sure flight over a VHF range, or down the glide path for an accurate approach right to the runway. Its action is gentle but precise, as it automatically corrects for drift and maintains the plane on the exact center of the beam. Aside from its obvious savings in scheduled operations, it is also a valuable addition to flight security and passenger comfort.

*REG. U. S. PAT. OFF.

***AUTOMATIC** Beam Entry ★ **AUTOMATIC** Beam Bracketing ★ **AUTOMATIC** Drift Correction ★ **AUTOMATIC** Landing Approach ★ **AUTOMATIC** Range Flying*

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DIVISION OF Bendix
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EDITORIAL

(CONTINUED FROM PAGE 1)

"Defense authorities know this better than anyone else, but in seeking a way out of their financial problems and under pressures from so many old-line influences, they find an excuse to de-emphasize military transport in the thought that civil air commerce will fill the gap. This long accepted and much touted thesis is one of those truths which just isn't so."

We second the motion.

To those who consider air transport to be merely supplementary to surface, witness the Berlin situation where air is the *only* means. Who is to say that in another war highways and railroads will not be rendered similarly unavailable for use—or be nonexistent altogether in the combat areas?

And Berlin brings to light another, and rather unexpected, weakness in our over-all transport picture. The flying boat must not be neglected. The two airports in Berlin are strictly limited in capacity, but there are lakes available. The British are using flying boats with tonnage capacity far exceeding the capacity of landplanes being used. It would seem clear that the flying boat needs of this country need to be re-examined thoroughly.

Do the American people know that the Air Force and Navy have on order today fewer than 100 transport airplanes? Do they know that out of the great cutput during the war the Air Force has today only a fleet of 1300 obsolete C-47's and less than 450 near-obsolete C-54's and that most of these are not assigned to transport work? Do they know that the Air Force had to scrape the bottom of the barrel to get enough transports to Germany for the Berlin air lift and that the maintenance and overhaul problem is still unsolved? The public would indeed be shocked if they were aware of the true situation.

If and when we have a global emergency—and the Berlin air lift is almost a sufficient lesson in itself—the military are going to need global transport. But transport is the one item most neglected in Pentagon thinking. The U. S. has some of the most brilliant strategists of air warfare in the world—but they are leaving the problem of transport to someone else or until an emergency forces the issue. Transport lacks glamor.

Meantime some of our best production facilities are virtually idle. Douglas as one example is using only 11% of its plant capacity. Convair, Martin and Lockheed have unused capacity.

It is time the Pentagon awakened to reality. During the first month of the Berlin air lift only 164 transports were available and 110 of these were obsolete C-47's of low carrying capacity. In the realm of jet combat the Air Force is out in front. In the realm of a basic necessity such as transport, the Air Force is using 1918 planning.

An Air Transport Reserve

SOMEHOW or other the Civil Aeronautics Board should squeeze into its busy agenda an active study of how it can participate in the air defense program. In the June 1 issue of this magazine Arthur F. Kelly, assistant to the president of Western Air Lines and a lieutenant colonel in the Air Transport Command during the war, outlined a program for a full-scale contribution by the airlines to the nation's preparations for defense. Kelly presented his proposal on behalf of Western Air Lines to the Air Transport Association. It was a practical and comprehensive program.

Nothing has been done to put this proposal into effect. The primary responsibility rests with the CAB under terms of the Civil Aeronautics Act although it is doubtful if the CAB members fully appreciate this fact. It is probable, too, that the CAB members don't realize that unless they pick up the ball now, nothing will happen to a program best suited to the airlines and airline personnel.

Airline men from coast to coast want to participate in some kind of air reserve activity. The airlines have full facilities available. Both manpower and airline facilities should be utilized. An Air Transport Reserve could be established at every airline base with a minimum of expenditure and difficulty. We hope CAB Chairman O'Connell, who has demonstrated his ability to learn and act fast, will take the leadership in placing the CAB squarely in the national defense program, a position which it relinquished by default during World War II.

On the Beam

ONE of the finest postwar aviation enterprises is the Flight Safety Foundation of which Jerome Lederer, one of the nation's top air safety experts, is president.

Here is an independent non-profit technical organization which can play an important role in improving safety in flight. It needs the support of all branches of aviation. On the average, 1 in every 85 airplanes (all types) is involved in a fatal accident each year and 1 in 8 in a non-fatal operational accident. For automobiles the fatality rate is about 1 fatal accident for every 3,000 cars, not including fatalities to pedestrians. This record leaves no doubt as to the emphasis required on accident prevention.

One of the early projects being undertaken by the Foundation is a series of training courses for accident investigators. Learning the causes of accidents is most important and all too often blame has been assessed hastily on pilots or structural failure before the real facts are learned. Among those associated with Lederer is Richard T. Crane who is concentrating on cockpit research at the Foundation's laboratory at Wood's Hole, Mass. The Flight Safety Foundation is a worthy effort in the right direction.

WAYNE W. PARRISH

"Never shrug off an idea because it isn't familiar. The writer has seen American air power virtually built from rejected ideas."—Gill Robb Wilson in the *New York Herald Tribune.*


United Air Lines
has flown
10 million passengers
5 billion
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Here's PROOF of why MARTIN 2-0-2 Airliners Spell PROFITS for Airlines:

Northwest Airlines, first domestic airline to modernize its twin-engine fleet, has found in nearly a year of service that the Martin 2-0-2 airliner means:

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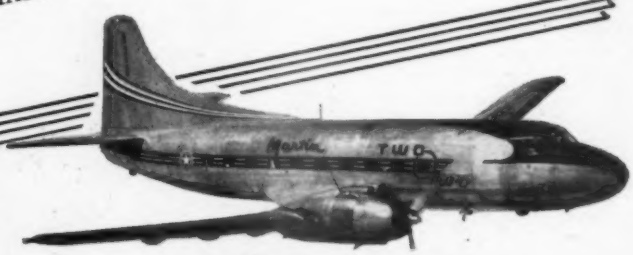
UNPRECENDENTED ECONOMY . . . Design and construction of the Martin 2-0-2 keep operating costs to a minimum.

Higher speeds . . . greater payloads . . . reduced ground time . . . wider operation . . . all spell increased earnings to the airlines.

THE GLENN L. MARTIN COMPANY, BALTIMORE 3, MD.



"FLAK BAIT," Devon Francis' new book (Duell, Sloan & Pearce), is the thrilling story of the heroic men who flew and serviced Martin B-26 Marauders in bomber strikes from the Southwest Pacific to the Aleutians; from North Africa to the gates of Berlin. The Glenn L. Martin Company is proud to be mentioned in the combat roll call of these gallant airmen.

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Did you miss "The Case of Airline X," "The Case of Airline Y" or "The Case of Airline Z"? We'll be happy to send you copies of these factual case histories. Just drop us a line today.

BACKGROUND & TRENDS

Undecided on Fares: While another large domestic airline is expected to file for a passenger fare increase soon, most carriers have not yet indicated what action they will take. As of last week, only United, TWA, and American filed for fare increases Sept. 1. Capital Airlines had indicated its policy was to stand pat, at least until it is seen what effect the additional increase may have upon traffic.

Support for Prototype: *Chances for passage of prototype aircraft legislation early in next session of Congress look fairly good. Already set up is an unofficial advisory council among government civil and military aviation departments to study the program to be carried out by such legislation. Chairman of the group is Grant Mason, assistant to Cornelius V. Whitney, assistant secretary of the Air Force. Other members include Howard Jones, CAB member, George Burgess of CAA, Charles Cary of Navy, and a representative of NACA.*

PAA & Merger Talk: Merger negotiations between Delta and National are moving ahead, despite reports that Pan American has extended a feeler toward National. The latter says its sole interest at this point is completing a deal with Delta.

Service Worth Cost: *Airlines already are getting back a considerable number of shippers who shifted to rail express when higher air freight tariffs went into effect July 1. Rate-conscious shippers apparently are finding the faster service worth the higher charge.*

Business Sagging: Current cutbacks in motion picture industry are adversely affecting transcontinental carriers. Big volume of movie air travel involves business office personnel in the studios and in New York offices, and current traffic between Hollywood and New York is poorest in years. Movie industry coast-to-coast travel is probably not more than 5% of normal, representing drop in revenue of thousands of dollars to the airlines. United Air Lines has switched its crack Los Angeles-New York DC-6 flight, which it calls "The Hollywood", from Lockheed Air Terminal to Los Angeles Municipal Airport. It originally operated from Lockheed because of proximity to radio and movie trade.

Rail Preference Claimed: *Based on a claimed nationwide survey of public opinion, the Association of American Railroads states that public preference for rail travel over air travel has increased from 51% in 1947 to 56% this year. Only 13% of people questioned favor government operation of railroads. AAR officials said the actual report is confidential and copyrighted, available only to rail executives.*

Parcel Post Extension: U. S. international air parcel post system will be extended at early date to South America and the Orient. Rates are ready, and only the go-ahead from Postmaster General is needed.

Gripe: *The New York Port Authority is charging airline employes $2.50 per month for parking their cars at Idlewild. It is one of the least happy of a great many unhappy moves made by the Authority.*

Teterboro Still Available: Scheduled airlines, which have encountered continual difficulties and impossible demands in their dealings with the Port of New York Authority, are still seriously considering use of Teterboro airport in New Jersey as a terminal. PA does not have option on Teterboro as it had claimed.

Airports & National Parks: Move is underway to make national parks more accessible to air travelers and private flyers without violating National Park Service's rule forbidding planes to land and take-off within park boundaries. CAA and Dept. of Interior are considering drafting of legislation making possible construction of airports adjacent to but just outside the boundaries of principal national parks. Proposed airports would probably be at least of Class II size, able to handle twin-engined transports as well as private planes.

Supply & Demand: *Dealers report that prices of Douglas C-47 aircraft in good condition are edging upwards, as result of short supply and continuing demand. It now costs about $25,000 for one in good condition, and even planes that are high on time and need considerable work are bringing up to $20,000.*

Old Planes: Charlie Babb, whose Babb Company at Grand Central Airport, Glendale, Calif., is known throughout the world, is spearheading a drive to complete a chronological collection of air transport planes. He has a 1912 Curtiss Pusher that carried passengers, a Jenny and an old de Havilland, and he knows where he can get most of the other types. But he hasn't located as yet a razor-back Fairchild of the type Cy Caldwell flew when Pan American opened up its first route, and a Sikorsky S-38. Babb's getting some help in building up the collection from O. M. "Red" Mosier, v.p. of American Airlines, and Aubry Keif, who heads up the aviation department of The Texas Company.

Turbo-Jet Progress: *Commercial possibilities of the turbo-jet engine are emphasized by rapid strides being made in operational service life. During past three years overhaul time has been extended from 10 to 200 hours.*

Canadair Boom: Canada's aircraft industry has gained substantial international prestige as result of orders for Canadair's DC-4M placed by BOAC and Canadian Pacific Air Lines. DC-4M's will be flying both the Atlantic and Pacific. There is also possibility that same type aircraft may be acquired by British Commonwealth Pacific Airlines, the Australian-New Zealand-United Kingdom company formed to operate across the Pacific. British manufacturers look upon the British decision to purchase Canadian planes as a severe blow to their prestige and export trade.

Canadian Policy Change: *Canada's international air transport policy, laid down earlier by former transport minister C D. Howe, has been completely reversed by decision allowing Canadian Pacific Air Lines to fly to the Orient and Australasia.* *(See page 15).* *Howe had been firm against having Trans-Canada share any international services whatever.*

Improvement: Last fall this magazine reported that porters at Santos Dumont Airport in Rio de Janeiro had set all-time records for having their hands out for exorbitant tips. It is a pleasure to report that a sign in English has now been prominently displayed at the airport stating that porters are not permitted to charge more than five Cruzeiros (local currency) for carriage of each passenger's luggage from or to the station to or from a taxicab. The sign also says taxi drivers are not permitted to refuse any fares or charge above regular rates and asks passengers to notify airport officials of any infringement of these regulations. This magazine learns that its article last fall brought about this decided improvement.

Keeps a plane from wiggling its nose

TAKING the shimmy out of nose wheels is a problem that has plagued a lot of airplane engineers. Shimmy sets up vibration in the plane's nose. Too much of it can even damage the airplane.

Convair engineers, designing the new 240, figured out a way to fight shimmy at its source. Instead of the standard design of wheels turning independently on the axle, their new design called for co-rotating axle and dual wheels. With the wheels turning together, they reasoned, the opposing pull of one would keep the other rolling steadily and smoothly.

B. F. Goodrich engineers tackled the job of developing the new wheels. They built light, strong duals. Engineered the wheels to provide a rigid mounting on the axle. Balanced them precisely.

Tests of the new assembly showed remarkable results! Shimmy and vibration were eliminated.

The Convair-Liner's nose wheels—like the main wheels—are equipped with B. F. Goodrich tires. Smaller and lighter than the tires on prewar twin-engine transports, they have marked advantages in weight and economy. Because twin tires are used all around, safety is increased.

The research which keeps B. F. Goodrich first in rubber works to make flying better, cheaper and safer. Look for greater discoveries to come from the new B. F. Goodrich Research Center—world's leading center of rubber research. *The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.*

B.F.Goodrich
FIRST IN RUBBER

Established June 1, 1937 **AMERICAN AVIATION** Volume 12 Number 6

CAB Opens Investigation Of Large Irregular Carriers

By KEITH SAUNDERS

For months some of the large irregular passenger carriers had been cutting sharply into the business of certificated transcontinental airlines by offering cut-rate second-class coast-to-coast air transportation, and had been engaging in practices which appeared to be in violation of the Civil Aeronautics Board's economic regulations.

It was estimated that the irregulars were skimming at least $10,000,000 a year off the transcontinental market served by certificated airlines. (AMERICAN AVIATION, July 1, p. 14).

A crack-down seemed inevitable, and at last it started on Aug. 6.

On that date, CAB made a three-pronged announcement directed at the alleged offenders.

First, it said it was opening an investigation into the practices and activities of Large Irregular Carriers, with hearings slated for the near future.

Secondly, it announced that no Letters of Registration for Large Irregular Carriers would be issued except on applications filed by 11 a. m., Aug. 6.

Finally, it said CAB's staff had been directed "to re-examine Section 292.1 of the Economic Regulations in the light of the experience gained since the regulations were promulgated in May, 1947."

By "Large Irregular Carriers," the Board referred only to those lines exempted from the certificate provisions of the Civil Aeronautics Act and allowed to engage in so-called non-scheduled or irregular passenger operations; or, specifically, any carrier operating an aircraft over 10,000 pounds gross take-off weight, or a fleet of planes with a gross weight of at least 6,000 pounds each and an aggregate fleet weight of 25,000 pounds.

Directly affected, of course, were those irregulars who have operating DC-3's and DC-4's coast-to-coast at rates of $99 plus tax, and in one case, of $88 plus tax, as against a minimum certificate airline fare of $130.15 plus tax.

Causes for Crackdown. The proposed investigation was ordered, the Board said "to determine whether civil or criminal proceedings should be brought on behalf of the Board for violation of the Civil Aeronautics Act and the Board's regulations."

It will include, CAB explained, "an examination into the practices whereby a number of Large Irregular Carriers appear to be acting in concert, frequently with the assistance of ticket and travel agents, to furnish a regular air service." This agency practice, along with apparent tariff violations and excessive frequency and regularity of service, were cited as primary causes for the crack-down.

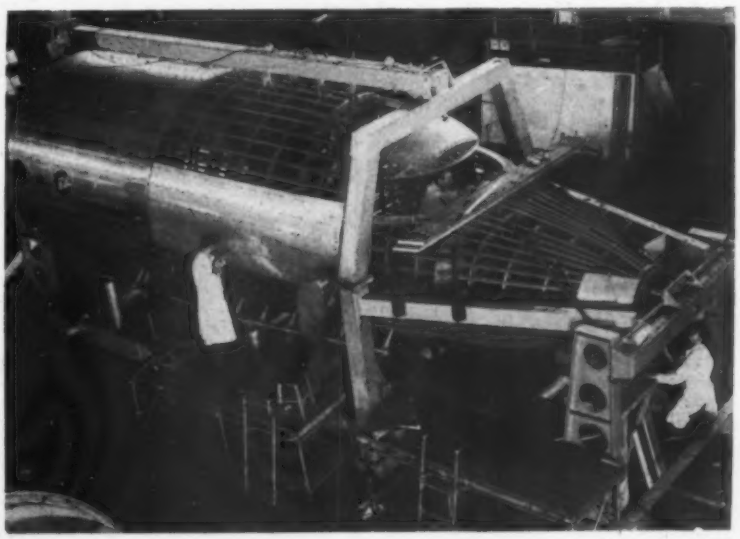
One of the carriers whose practices the Board wished to investigate was Standard Air Lines, Inc., of California. In fact, CAB has attempted on Aug. 5 to suspend Standard's Letter of Registration on the grounds that its operations between Los Angeles and New York were of such regularity and frequency as to exceed the limits permitted under 292.1, that it represented its flights as being available on a "daily" and a "daily except Sunday" basis, that it had failed on various occasions to file required tariffs with the Board, and that its operation "impairs and interferes with the proper discharge of the Board's functions and contributes to unsound economic conditions in air transportation, and constitutes unfair competition with certificated air carriers."

Standard, however, went into the U. S. District Court for the District of Columbia next day and procured a temporary order restraining CAB from suspending its Letter.

In slamming the door against all further Large Irregulars, CAB said there already were 109 such carriers holding Letters of Registration, and that this number "appears . . . sufficient to satisfy the demand for irregular air service." Further service of the type offered by these carriers, it added, should be authorized only after a full consideration by the Board of the facts in each case. A public demand and need for such services existed in May, 1947, when 292.1 was issued, it stated, but there no longer appears to be any public interest to be served by issuing further authorizations of this type.

In disclosing that its staff had instituted an appraisal of 292.1 and of "the question of whether the operations contemplated by that section for Large Irregular Carriers had been, and are, useful to the public and economically feasible," Board said this study should indicate whether it is necessary at this time to change 292.1.

It said an important announcement concerning this regulation could be expected in the near future.



C.102 Jet Airliner— Shown above is the nose section of the jet transport under construction by A. V. Roe Canada Limited, of Malton, Ontario. Each of the five major sections into which construction activities have been divided is well underway with a prototype flight testing scheduled for next February. Powered by four Rolls Royce Derwent Mark 5 jet engines, it will carry 36-40 passengers at a cruising speed of 400 mph.

Route Cases:

NWA Gets Hawaiian Route

The Pacific Northwest-Hawaii Case, in which four applicants sought a certificate to fly between the co-terminals Seattle and Portland and Honolulu went to the CAB for decision last Feb. 11, was decided Mar. 16, and was approved by President Truman July 29.

The decision awarded a five-year certificate to Northwest Airlines and turned down the applications of Pan American Airways, Matson Navigation Co. and Transocean Airlines, Inc.

The CAB majority opinion, from which Vice Chairman Oswald Ryan dissented, gave the route to Northwest on conclusions that:

(1) NWA would offer more new one-carrier service than any other applicant;

(2) NWA would provide additional service to the traffic potential in the north central and northeastern U. S. which would not be served by Pan Am and which would assist in developing the route;

(3) certification of NWA would not place PAA at any real competitive disadvantage with foreign carriers for traffic between the Pacific Northwest and Australasia "and even if it did the traffic subject to diversion is not significant compared to the amount offered improved service by Northwest."

The Board ruled out Transocean's application on the grounds that it would offer nothing the other applicants could not provide and would probably cost more. Matson's application was rejected because PAA or NWA could offer more benefits that it could.

Speculation. What had happened during the nearly five months between the Board's original decision and affixing of the President's signature? A press wire service thought it saw a tipoff in statements made by Senators Wayne Morse (R., Ore.) and Warren Magnuson (D., Wash.) to the effect that CAB had turned down the route but that its findings had been rejected by the President, who had asked that the Board "re-examine" the case.

The Senators were quoted as saying they were hopeful the re-examination would result in approval of the route. The day after these statements appeared in the press, it was announced that the decision had been signed by the President.

Inference was that CAB's original decision had followed the line of Ryan's dissent in finding that no direct air service was required between the Pacific Northwest and Hawaii, and that Truman had rejected this finding and had sent the decision back with the implication that CAB would have to award the route to one or another of the four applicants before he would sign.

Whatever had happened, the Pacific Northwest had the service it wanted, and Northwest Airlines had added another 2,500 miles or so to its route system.

WAL Offers Route Transfer

A year ago, Western Air Lines was on the verge of receiving CAB permission to sell its Denver-Los Angeles route segment to United Air Lines. This month, Western went before the Board with regard to another route segment. It was offering to transfer its San Diego-Yuma route to the newly-certificated Arizona Airways.

Terrell C. Drinkwater, president of Western, and H. O. Nelson, president of the Arizona carrier, in a joint statement regarding the proposed transfer, pointed out that the San Diego-Yuma route did not integrate properly with other WAL routes but would be a sensible addition to the Phoenix-Yuma route recently awarded to Arizona by CAB.

Western had sought to strengthen the impractical and uneconomical route by applying to extend the route from Yuma on to Phoenix, but this application was denied by CAB in the Arizona-New Mexico Case decision, in which the Yuma-Phoenix route was awarded to Arizona Airways. The latter, just now preparing to implement its certificate, probably would find the route from Phoenix to Yuma equally uneconomical to operate as WAL has found the San Diego-Yuma route segment, but if the two segments could be joined, the route might become a profitable one, it was suggested.

Instead of the thrice-weekly service which Western has been operating over the route to Yuma, Arizona would be able to provide the cities on the route with twice-daily service, morning and evening, seven days a week.

By approving the transfer, it was implied, CAB might substantilly reduce the amount of mail pay involved in operation of the San Diego-Yuma route segment as well as the amounts for which it is obligated in connection with the Phoenix-Yuma route.

In applying for CAB approval of the proposed route transfer, the companies also asked approval for the sale of certain properties used and useful in operating the segment. A schedule of specific items will be filed later.

Transfer of the Route 13 segment would be made contemporaneous with Arizona's temporary certificate for Route 93 and would become absolute if Route 93 is made permanent.

The application lists a consideration of $5,000 cash to be paid WAL when the deal is completed. WAL retains an option to repurchase the property to be transferred if the route transfer is not final. Agreements are void in the event of Arizona bankruptcy.

K. C. Routes Reaffirmed

In a three-two decision, with Chairman Joseph J. O'Connell, Jr., and Member Josh Lee dissenting, the CAB on July 28 reaffirmed previous awards of a Kansas City-Memphis route to Chicago

Helicopter Mail—Los Angeles Airways is facilitating the handling of air mail between its helicopters and the airport Post Office and trunk line planes with this light, highly maneuverable powered scooter-type truck. It is a Salsbury "Turretruk" and may be used singly for mail loads up to 2,000 lbs. or two trailers with like loading can be attached to it.

and Southern Air Lines and a Kansas City-St. Louis route to Mid-Continent Airlines.

Traffic figures show more movement between Kansas City and the southeast than between KC and Memphis, the majority opinion said, but development of the latter traffic potential has been hampered by lack of a direct service in place of the present circuitious connection. The previous award of the route to C&S was reaffirmed on the basis of its ability to develop the local traffic and the fact that designating any other applicant would result in "serious diversions" from C&S.

Another factor which was soft-pedaled by the Board but which unquestionably figured largely in its decision to reaffirm was a "grave doubt" entertained by the majority as to the Board's power to take away a certificate already awarded to one carrier (C&S in this case) and give it to another carrier. To make certain that such a question should not come up again, the majority opinion stated that "in future cases of this kind, except where national security or other urgent considerations dictate otherwise, we shall pursue a policy of making the certificate effective on such date as will permit reconsideration without creating the legal problem raised in this case."

The KC-Memphis route was awarded to C&S last year in the Kansas City-Memphis-Florida Case decision, but just three days before the scheduled inauguration of service the Board stepped in with an order staying the certificate and reopening the case for reargument and reconsideration. The action was bitterly protested at the time by C&S officials, who termed it "unprecedented."

Starts Sept. 9. C & S has set Sept. 9 as date for inauguration of service. Initial service will be two-round-trips daily, with one flight operating non-stop and the other making intermediate stops at Little Rock and Springfield.

The award of the KC-St. Louis route to Mid-Continent was made last December in the Mississippi Valley Case decision, and Mid-Continent has been operating the route for some months now, despite the Board's reopening of the case for reconsideration.

Concurrently with its reaffirmation of the previous awards, CAB instituted a proceeding to determine whether there is a public need for interchange or other through service arrangements (1) between MCA and Eastern Air Lines at St. Louis; or (2) between MCA, C&S and Eastern or Delta at Memphis; and (3) between Braniff Airways and Eastern or Delta at Memphis.

The majority found that "investigation of the desirability of providing, through interchange or similar arrangements, for the needs of such through traffic as may be involved in this case seems to be warranted."

The minority voiced a sharp dissent, saying that interchange arrangements to handle through traffic would necessarily involve three carriers and would be "needlessly complicated."

CPAL Plans Orient Routes

For several years, American steamships and airlines had been making considerable headway in grabbing off passenger traffic formerly carried by liners plying between Canada and the Orient and Canada and Australasia but which the ships have not been able to carry because of wartime fleet losses and the present high cost of steamer replacement. From the Canadian standpoint, something had to be done, and in late July the Transport Ministry announced what that something would be.

Beginning as soon as equipment can be acquired, probably by next summer, Canadian Pacific Air Lines, it was announced, will add 14,420 route miles to its present services, inaugurating flights from Vancouver to the Orient and from Vancouver to Australia and New Zealand.

Routes to be flown are: Vancouver-Honolulu-Canton Island - Fiji - Sydney, 7,865 miles; and Vancouver-Kodiak-Shemya Island-Tokyo-Shanghai-Hong Kong, 6,555 miles. A branch service from Fiji will connect New Zealand with the through Sydney-Vancouver service.

The Orient flights will follow almost precisely the Great Circle route now being flown by Northwest Airlines westward from Shemya.

Equipment to be used in the new service will be four pressurized four-engined Canadair 4's to be built by Canadair Ltd., at Montreal. They will have a cruising speed of 300 mph and capacity of 40 passengers and three tons of cargo, mail or express.

Operational headquarters for the new international services will be established at Canadian Pacific's base at Sea Island Airport, Vancouver. Overhaul work now being done there on domestic planes of the line will be transferred to Edmonton. CPAL said it already has a sufficient number of trained and experienced men in service to man the new flights.

It is expected eventually, according to G. W. G. McConachie, president of CPAL, that high-speed cargo and passenger traffic would be handled by air, heavy cargo and leisurely tourist traffic by sea, and the same agency could arrange combination passenger trips, one way by air and the other by liner.

Hawaiian Service Favored

Additional passenger service for the Hawaiian Islands, to be operated under a three-year temporary certificate by Trans-Pacific Airlines, Ltd., has been recommended by CAB Assistant Chief Examiner Thomas L. Wrenn in the Intra-Territorial Service in Hawaii Case. He suggested that CAB defer action on a freight service application of Trans-Air Hawaii, Ltd., until sufficient reports have accumulated to establish operating trends for the company's recently-acquired C-46 aircraft.

Trans-Pacific's route as recommended would be: Honolulu to Hilo via Hoolehua, Lanai City, Maalaea and Upolu Point, and between Honolulu and the terminal point Port Allen and/or Barking Sands, Kauai. Passenger and property service only would be authorized.

NEA Suspends at Moncton

Northeast Airlines has been permitted by CAB to suspend service at Moncton, New Brunswick, for a period of one year because of insufficient traffic, leaving Montreal as the only point served on its Route 27-F.

In asking for the suspension, Northeast had pointed out that load factors on the Bangor-Moncton segment had been averaging about 15% with consequent substantial operating losses to the company.

Coach Service Proposed

Three non-certificated transcontinental airlines, banded together in an organization called the Air Coach Association have applied for a CAB certificate to operate a scheduled reduced-fare coach-type air service between California and the East.

The three lines—Standard Air Lines, Viking Airlines and Airline Transport Carriers—asked for a temporary exemption order permitting them to start their scheduled low-cost flights immediately, and asked for an oral argument so they could present their case to the Board quickly.

The Air Coach Association was described as "a trade association to further the efforts of its members to furnish a low-cost regularly scheduled air coach service for a different and substantially greater traffic market than is now served by certificated air carriers." Stanley Weiss, president of Standard, heads the organization.

Asserting that profitable commercial operations "are impossible under present restrictive regulations governing non-scheduled passenger flying," the three carriers told the Board they would have to go out of business if not given a chance to fly on schedule.

They said they could operate a profitable coast-to-coast passenger service "without the benefit of any mail certificate or other direct government aid" and at prices from $50 to $70 lower than those quoted by the certificated transcontinental airlines. This would be accomplished, they said, by eliminating "unnecessary luxury expenditures," such as free meals in transit, "elaborate reservations systems, extensive passenger and rapid baggage handling facilities, and public relations programs with their incidental high budgets."

Declaring that "the development of a sound air transportation system requires that air travel be made attractively available to the great market for passengers who can afford only low-coast air passage," the three carriers told CAB they would undertake to fly the coast-to-coast routes at a fare of $113.85, including tax, or about one-third less than present DC-3 and DC-4 fares of the certificated carriers.

FINANCIAL

Retroactive Pay Barred

Barring the possibility of a further and successful appeal to the U. S. Supreme Court, retroactive mail rate increases for air carriers became a lost cause Aug. 2, when the U. S. Court of Appeals for the District of Columbia ruled against Trans World Airline in an appeal by the latter from a Civil Aeronautics Board mail rate decision.

At stake for the carrier was some $11,000,000, most of it representing losses incurred by reason of the Constellation groundings and the 1946 pilots' strike. TWA had sought to recoup its losses by having CAB make retroactive increases in its mail rates.

CAB had denied the increases, asserting that it was without legal power to make retroactive adjustments of rates once fixed as final and not challenged. The Court upheld this stand.

There is nothing in the Civil Aeronautics Act, said the three justices, "which indicates that Congress intended to guarantee a profit to every carrier."

Regarding the recapture principle the opinion declared:

"If the Board could redetermine the rate for a past period when the carrier has made less than an adequate profit, or no profit at all, it could do so when the carrier has made more than an adequate profit. The financial confusion which would follow from the latter conclusion would seem obvious. No rate order would be final. No dividend declaration would be secure."

TWA Stock Conversion

Warren Lee Pierson, TWA board chairman, stated on Aug. 2 that early proxy returns have shown stockholders to be overwhelmingly in favor of the proposed plan to clear the way for more equity financing by increasing the authorized stock issue from three to four million shares and to remove the $10,000,000 debt to Hughes Tool by permitting conversion of the Hughes-held notes into common stock at $10 a share.

Stockholders of Transcontinental & Western Air, Inc., at a special meeting in Kansas City Aug. 10, were being asked to approve the stock increase and to approve a modification of the present basis of conversion into common stock of TWA of notes of the company held by Howard Hughes' Hughes Tool Co.

Explaining the latter, Pierson said:

"A little over a year ago Mr. Hughes came to the rescue of TWA with a ten million dollar loan convertible into common stock at any time up to 1956. A few months ago he voluntarily gave up his right to collect the debt and proposed to satisfy the loan out of common stock. Now the directors are proposing that the conversion be made immediately on the basis of $10.00 per share in the hope that the company will be in a better position to finance at the appropriate time. Any outstanding conversion right is always a handicap in undertaking public financing. . . . "

The proposal, which he said would be "very advantageous" to TWA, would have to be approved not only by the stockholders but also by financial institutions holding other obligations of the company. Hughes now has the right to convert the notes into common stock at any time up to June 2, 1956 at the average closing price on the New York stock exchange over a 10-day period before conversion.

Profits Seen for C & S

Cheering news greeted Chicago and Southern Air Lines stockholders a fortnight ago when they opened a letter from President Carleton Putnam explaining the probable effects of the permanent domestic mail rates proposed for the company by CAB last month and put into effect two weeks ago after company acceptance.

The rates, Putnam said, "will have a significant effect upon the present financial position and future earnings of your company" Elaborating on their significance, he expressed the belief that the new rates will permit profitable future operation of the airline at present cost levels and with the volume of traffic now being handled.

Retroactive to Jan. 1, 1946, the rates will yield C&S additional mail pay of $1,055,000 for the years 1946 and 1947, and an estimated additional $550,000 for the first six months of 1948. This would give C&S an estimated $250,000 profit for the half-year period.

The estimates, Putnam said, were all based on no income tax liability, as the additional retroactive mail pay and profit for the first six months of this year would be applied against losses in 1946 and 1947 under the loss carryforward provisions of the Internal Revenue Code.

It was pointed out that the estimates apply only to C&S' domestic operations, no permanent mail rate having been set as yet for the company's international operations.

UAL Loses $3.2 Million

Although a second-quarter profit of $310,682 helped, it didn't go nearly far enough toward offsetting the $3.5 millions United Air Lines lost in the first

TWA On-Time Winners—Framed award certificates were presented to the nine winning stations in Trans World Airline's recent "On Time all the Time" contest during a dinner held in Kansas City July 28. Cash prizes totaling $1,575 also were presented by John A. Collings, TWA vice president-operations.

Left to right, back row: H. W. Oesch, South Bend station manager; George Langenbuch, chief radio operator at Fresno; E. F. Kammerer, Indianapolis station manager; Worth Johnson, Kansas City station manager; Jack Knapper, St. Louis station manager; E. O. Cocke, TWA v.p.-traffic; D. W. Harris, director of industrial relations; Arthur B. Eisenhower, member of the TWA board of directors; A. V. Leslie, v.p. and treasurer; John A. Collings, v.p.-operations; Clifford Mutchler, director of passenger service and toastmaster at the dinner.

Front row: L. J. Vandergrift, superintendent of station service for the Western region; Mel Reavis, transportation agent at South Bend; Carl Flournoy, station manager at Fresno; Larry Leigh, chief transportation agent at Indianapolis; James O. Small, lead transportation agent at Kansas City; W. O. Richardson, assistant station manager at St. Louis; Walt Harris, Amarillo station manager; Ray Beard, lead transportation agent at Amarillo; Bob Word, Prescott station manager; H. F. Lawless, Wichita station manager; Earl Grimm, Wichita cargo agent.

three months of this year. Result: a net loss of $3,239,852 for the first six months of 1948. This was $39,652 more than the net loss for the first half of 1947, but the latter period benefited from a tax credit of $1,176,000 in excess of the 1948 credit.

Despite decreases of 20% in general and administrative expenses and 6.5% in traffic, sales and advertising expenses, United's total operating expenses for the first six months of this year were up 8.5%. Revenues for the half-year period totaled $34,645,827, as compared to $30,179,300 in the first half of 1947, but operating expenses, already well above revenues, went up, too—from $34,791,354 to $37,803,070.

W. A. Patterson, UAL's president, sharply criticized the CAB for its failure to establish permanent air mail rates for the company and grant adequate temporary rates.

"The air transport industry," said Patterson, "has exerted every possible effort toward intelligent economy in order to maintain passenger fares at 1941 levels and carry the U. S. mail at greatly lower than prewar rates." This is no longer possible, he added, and the industry "cannot be expected to accomplish something that other forms of transportation and business have been unable to do in the face of rising costs."

Equipment Trust Financing

So eagerly snapped up was its first offering of airline equipment trust certificates in May and June that the New York underwriting firm of Gearhart & Co. two weeks ago announced a second and similar issue of $150,000 in trust certificates.

The money will be used for the purchase of another DC-4 aircraft to be added to the fleet of Trans-Caribbean Airways. Through the financing arrangement, with the Colonial Trust Co. of New York as trustee, Trans-Caribbean will be able to lease the plane for $5,250 a month, as compared to a previous financing cost of $16,000 a month.

Beech Free of Debt

With the discharge of about $1,600,000 in long-term obligations in late July, Beech Aircraft Corp. announced that it was free of all debt except current liabilities due to the normal operations of the business. All bank loans, mortgage loans and deferred renegotiation payments had been paid in full, and the company had a ratio of current assets to current liabilities of 2.63 to 1.

The company has recently experienced a revival of the commercial market for the Model 18 twin-engine Beechcraft. Whether this revival would be affected by a new price increase of 4½% remained to be seen.

Pioneer Profits: Pioneer Air Lines, only one of the feederlines to show a profit on 1947 operations, was on the way toward another black-ink year with a profit of $5,824 for the six months ending June 30.

MCA Recovering: After taking a net loss of $104,914 in the first quarter of this year, Mid-Continent Airlines came back in the second quarter with a net profit after taxes of $72,602, reducing its net loss for the first half-year to $32,312.

LABOR

IAM Strikers Return

National Airlines this month made peace with one of its striking labor factions—the International Association of Machinists, representing office, clerical

TRUCE: G. T. Baker, president of National Airlines (left), and Harvey W. Brown, IAM president, reach truce agreement and workers return.

and mechanical employes. Under a truce agreement, the striking employes returned to work between Aug. 2 and Aug. 13, and negotiations for a working agreement covering their employment with the carrier were to begin by the end of the month.

Harvey W. Brown, president of IAM, commented that "management of National Airlines and the Machinists Union have jointly accepted a responsibility to do a job that can be completed with mutual benefit."

NAL Rejects Board Report

The nature of recommendations made by the President's Emergency Board in the National Airlines pilot strike case and promptly accepted by the Air Line Pilots Association had made it almost certain that National would reject them, and this it did on Aug. 2.

In a letter to Robert F. Cole, secretary of the National Mediation Board, G. T. Baker, president, stated the airline's position:

"Failure of the (Emergency) Board to perform its clear duty to rule upon this company's motion for dismissal on the grounds of lack of jurisdiction, if followed, would render such boards mere instruments for rescuing unions from perilous situations of their own making.

"The recommendations . . . that the company reinstate all striking employes at the expense of their duly hired replacements, should it become a precedent, would constitute the strike a weapon of force against which management, prohibited from attempting to continue its business, would have no defense. The threat of such action consequently would render employers impotent at the collective bargaining table."

Reasons for Rejection. Principal reasons for National's refusal to accept the recommendations, as outlined in the letter, follow:

1. In March and again in April, 1948, the chairman of the Mediation Board wrote letters stating that the strike of National Airlines pilots did not threaten to interrupt interstate commerce (the grounds on which the Executive Order creating the Emergency Board was issued).

2. The Emergency Board was created on May 15, 1948, after the pilots had lost their strike and when National was in full-scale operation of all scheduled flights.

3. The Board did not rule on the company's motion for dismissal on grounds of lack of jurisdiction.

4. In late April the president of ALPA sent a letter to President Truman informing him in effect that pilots of other airlines would boycott airports served by NAL unless the dispute were settled, and the Board would neither permit National's attorneys to read this letter nor to include it in the record.

5. The Board in its report ignored the fact that the company had offered to re-employ former pilots in existing and future vacancies and that this offer has never been withdrawn.

6. The Emergency Board, in its report, implied disapproval of the precautions taken by the company to insure a mature and informed review of management's judgment as to the competency of an airline pilot.

After receipt of Baker's letter, Secretary Cole said the Board probably would take no further action in the case "as it appears that all of NMB procedures under the Railway Labor Act have been followed."

ALPA Not Surprised: NAL's rejection of the board's recommendations to settle the strike was called "not unexpected" by the Air Line Pilots Association. David L. Behncke, ALPA president said the union would press for immediate revocation of the airline's certificates of convenience and necessity by the CAB.

Pridefully pointing to the success attained by the pilot strike, Behncke declared:

"The American public needs no further proof that the strike of the company's regular, veteran, and skilled air-

line pilots has been phenomenally successful than to ask G. T. Baker for a statement of his company's financial condition today and a statement of the company's financial condition prior to the strike, and make a comparison of the company's revenue-paying business for the same period this year and for 1947. This will tell the whole story and the utter failure of the company's attempts at strike-breaking airline operation."

Raise for TWA Hostesses

Pay raises for approximately 550 TWA flight hostesses and pursers are provided in a new contract marking the first renewal of a basic contract for hostesses since the Air Line Stewards and Stewardesses Association's first contract with an airline was signed in May, 1947.

The new wage scale for hostesses flying on TWA's domestic routes ranges from $180 as a starting wage to $255 during the seventh year of service, as compared to the old scale of $170 to $235 for the sixth year of service and thereafter.

International hostesses have a new scale increasing from $190 to $280 over a seven-year period, and flight pursers will start at $250 and go up to $350 in four and one-half years.

These were said to be the highest wage scales for hostesses and pursers in the airline industry.

Transocean-Pilot Agreement: The Air Carrier Pilots Association, a subsidiary of the Air Line Pilots Association, has announced the signing of a contract covering the pay and working conditions of pilots and co-pilots employed by Transocean Air Lines, one of the largest of the contract carriers and first of its classification to approve such an agreement. Contracts covering Transocean's radio operators and navigators had been signed previously.

——ECONOMIC REGULATION——

CAB Order Hits Transocean

Transocean Air Lines has been ordered by CAB to cease and desist from advertising which leads the public to believe that it performs regular service between designated points; from operating any trans-Atlantic flights while there are outstanding any advertisements or other announcements which hold that it operates regular or frequent trans-Atlantic cargo flights; from engaging in any foreign transportation of persons within the meaning of the term "foreign air transportation"; and from representing to the public that it is engaged in business of carrying passengers as well as property in foreign air transportation.

CAB plans to assign the proceeding for public hearing to determine whether Transocean has engaged, and is engaging, in foreign transportation of persons in violation of Section 401 (a) of the Act.

——CAB CALENDAR——

Aug. 17—Hearing on applications for Service to and from Pecos, Texas. (Docket 3322). Examiner Curtis C. Henderson. Postponed from Aug. 3.

Aug. 21—Hearing on proposals of Pan American Airways for consolidation of its Pacific Route Certificates. (Docket 2953 et al.) Tentative. Postponed from July 6. Examiner Ralph L. Wiser.

Aug. 30—Hearing in Capital Airlines Mail Rate Case. (Docket 484). Tentative.

Sept. 13—Hearing in Free and Reduced Rate Transportation Case. (Docket 2737 et al.) Postponed from Aug. 2. Examiner Barron Fredricks.

Sept. 13—Oral argument in the Air Freight Case. (Docket 810 et al.) 10 a.m., e.d.s.t., Room 5042, Commerce Building.

Sept. 19—Hearing on application of China National Aviation Corp. for amendment of its trans-Pacific Foreign Air Carrier Permit. (Docket 3402). Tentative. Examiner R. Vernon. Radcliffe.

Sept. 27—Hearing in Free and Reduced Rate Transportation Case. (Docket 2737 et al.) Postponed from Sept. 13. Place and hour to be announced. Examiner Barron Fredricks.

Air Taxi Network

In a move to extend the "complete benefit of air transportation" to passengers in every section of the country, the National Aviation Trades Association is working up a nationwide network of charter operators or "air taxis" to transport passengers between their home communities and airline terminals.

A national directory of charter operators is being prepared, and CAB approval of the enterprise will be sought.

NATA emphasizes that no competition with certificated short haul or community carriers is contemplated. Its position is that the so-called feeder lines actually are airlines, whereas the aerial taxi operators will be true feeders to the airlines, tapping a whole new market both for the air carriers and the charter operators.

Flight operators have been advised by NATA to apply for letters of registration as irregular carriers now, so as to be on the ground floor for any "grandfather" rights that might accrue.

Zay Smith Design Service

Zay Smith who has built up a solid reputation for his designing of United Air Lines' ticket offices, ground equipment, and the exterior and interior decorating of United's fleet of airplanes, has opened up his own firm at 431 North Clark St., Chicago, under the name of Zay Smith Associates.

With the full approval of W. A. Patterson, United's president, Zay Smith Associates embraces almost the entire design staff of the airline, and United is the first client. The new firm will continue to handle the airline's work and will seek other work in transportation as well as an enlarged service in the field of graphic arts, product designs, store and residential design, and the like. With Smith are Richard Barry, Norman Steenhof and Raylor Robinson, all from United.

Traffic Guide Name Changed

The name of *American Aviation Air Traffic Guide* is being changed effective with the September issue to *Official Airline Guide*, the publishers have announced.

Decision to simplify and streamline the name of the publication was made as a result of the purchase last spring of *The Official Guide of the Airways*. The familiar red cover and format will be retained.

Aviation Calendar

Aug. 18-20—SAE West Coast meeting, Hotel St. Francis, San Francisco.

Aug. 27-29—Ninety-Nines annual convention, Hotel Muehlebach, Kansas City, Mo.

Sept. 4-6—National Air Races, Cleveland.

Sept. 4—Reunion and banquet of Early Birds, Cleveland.

Sept. 13-17—National Instrument Conference and Exhibit, Convention Hall, Philadelphia. (Sponsored by Instrument Society of America, Pittsburgh.)

Sept. 18—Nationwide observance of Air Force Day.

Sept. 19-21—Northwest Aviation Planning Council 12th international convention, Vancouver, B. C.

Oct. 6-8—National Association of State Aviation Officials annual convention, Copley Plaza, Boston.

Oct. 6-9—SAE National Aeronautic Meeting and Aircraft Engineering Display, Biltmore Hotel, L. A.

Oct. 14-16—Air Line Dispatchers Assn. convention, Edgewater Beach Hotel, Chicago.

Oct. 17-21—National Aviation Clinic, Detroit.

Oct. 18-23—American Society of Travel Agents convention, Savannah, Ga.

Oct. 18—Personal Aircraft Council meeting, Detroit.

Oct. 20-21—Air Transport Section, National Safety Council, Hotel Stevens, Chicago.

Oct. 22-23—Fourth annual Arizona Aviation Conference, Prescott.

Nov. 8-10—Aircraft Distributors and Manufacturers Ass'n, annual meeting, St. Louis.

Nov. 8-10—Annual meeting National Aviation Trades Association, St. Louis, Mo.

Nov. 15-17—Aviation Distributors and Manufacturers Assn., annual meeting, Hotel Statler, Cleveland.

Nov. 16-18—National Association of Travel Officials annual convention, Miami Beach.

International

Aug. 24—ICAO Africa-Indian Ocean Regional Air Navigation meeting.

Sept. 6—ICAO Air Navigation Committee, Montreal.

Sept. 7—ICAO Council opens fifth session, Montreal.

Sept. 7-12—Society of British Aircraft Constructors show, Farnborough.

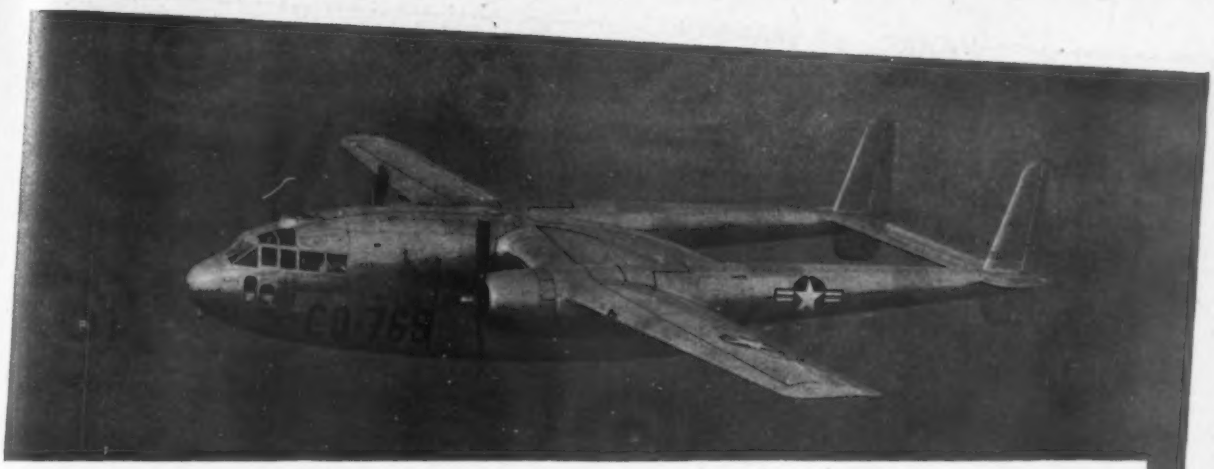
Sept. 7—ICAO Air Transport Committee, Montreal.

Sept. 9—IATA Legal Committee Brussels. (Date, tentative.)

Sept. 13—IATA Executive Committee, Brussels.

Sept. 14-18—IATA Fourth Annual General Meeting, Brussels.

Sept. 20—IATA Executive Committee, Brussels.



Now! An Even Bigger, Better Flying Boxcar —The Fairchild Packet C-119

Something new in the air.

Out of the tried and proved first plane ever designed specifically for cargo-carrying has come this latest creation of Fairchild engineers—a super Packet.

Like the original C-82 Packet, the C-119 is a product of close cooperation between Fairchild and the Air Force.

But, with increased payload, speed and climb, the new Packet can transport more men, more equipment and more supplies than its worthy predecessor. As an ambulance plane it is equipped to carry 36 litter patients and attendants.

This new Flying Boxcar incorporates improvements and modifications proved in thousands of hours of actual service. All in all, it is flying evidence of an air-transportable Army . . . and of Fairchild engineering and research skill.

Fairchild Aircraft

Division of Fairchild Engine and Airplane Corporation, Hagerstown, Maryland

Military Services Lacking In Adequate Air Transport

By JAMES J. HAGGERTY, JR.

As far as combat aircraft is concerned, World War II taught the U. S. a lesson. But with air transport it's another story.

It is a well-known fact that, at the outbreak of the last war, our national air power did not amount to much. We had, for instance, in the whole country, only 288 heavy bombers, and not all of these were in active service. We had slightly more than 2000 fighter aircraft in the Army Air Forces and about 1200 carrier type planes in the Navy.

Showing beneficial effects of our war experience, the strength of the Air Force alone within the coming year will be increased to more than 6,000 active first-line aircraft, backed by an Air National Guard of over 3,000 planes and an Air Reserve of more than 2,000. In addition, there will be 8,100 first-line planes in stored reserve—a total Air Force combat potential of approximately 20,000 aircraft. Navy and Marine Corps aircraft will total an additional 14,500.

But overlooked in the planning for the postwar Air Force is air transport. At the start of the war, military air transport was at a low ebb—we had only 33 two-engine medium transports (C-47's and C-53's). There were in service slightly more than 200 light transports (C-45's and C-78's), but their usefulness in combat operations was negligible. We had no four-engine transports.

It would seem that the China-Burma-India "Hump" operation and the air transport support of the ground armies on the various combat fronts would have impressed the military air planners with the need for an adequate force of transport aircraft. But apparently it has not.

Few in Transport. The Air Force has in service today a total of 1300 C-47's and 450 four-engine C-54's. This sounds like a fairly large transport fleet, but actually only a small percentage of these planes are now engaged in air transport work. A large number of them are assigned to tactical units, others are used for administrative duties, still more are engaged in air-sea rescue work. They could, of course, be drafted for transport duty in an emergency, but these other activities would suffer accordingly. In addition, the C-47 is rapidly growing obsolete as a military transport.

Military Air Transport Service operates a total of less than 300 planes, 205 of which, however, are C-54 type. In addition, the Navy's Fleet Logistic Support Wings have about 75 transport aircraft. The combined transport potential of the two air services is about one-eighth of the minimum strength which Maj. Gen. Laurence S. Kuter, MATS commander, told Congress he would require in the event of an emergency.

The air lift to Berlin is ample evidence of the critical nature of the military transport situation. During the first 30 days of operation, the Air Force managed to fly 36,000 tons of food and fuel into blockaded Berlin, a tonnage which rivals the famed "Hump" operation. This tremendous achievement, however, is far from an indication that our air transport is adequate; it is, instead, a tribute to the determination of Air Force leaders and the courage of the men who fly the planes.

The Berlin air lift is being accomplished with a minimum of planes. During the first month of operation, the maximum number of planes available, as far as the American effort was concerned, was 164—and 110 of these were two-engine C-47's, capable of a maximum payload of only two and one-half tons. The tonnage flown, then, was accomplished, not by plane strength, but by individual effort. Crews have been flying 16-hour stretches, and some of the planes have been making two and three round-trips daily. Maintenance crews are forced to work round the clock, since 65 per cent of the available planes must be kept in operation at all times.

Even to muster this scant force of aircraft, the Air Force had to scrape the bottom of the barrel. Few of the planes now engaged in the Frankfurt-Berlin shuttle were actually engaged in transport work before the emergency. The first groups of C-54's sent overseas were snatched from tactical units; the C-47's were assigned to troop carrier work in the European theater prior to the blockade.

MATS Caught Short. In the first demand for transport, MATS was so short of active aircraft that the Air Force had to call upon civilian carriers for assistance. Four carriers (American Overseas Airlines, Pan American Airways, Seaboard and Western Airlines and Alaska Airlines) were awarded contracts to make a total of nine flights to carry 62 tons of spare parts and maintenance equipment to Germany in the first week of July.

Two weeks later the Air Force was forced to resort to the civilian contract method again. This time Transocean Airlines replaced American Overseas Airlines, the other three carriers remaining the same. The second contract called for 15 flights to carry 100 aircraft engines to Germany and has since been accomplished. Meanwhile, in Germany, American Overseas Airlines had been called upon for assistance and was flying an average of 25 missions a week from Frankfurt to Berlin. Other commercial carriers have made one or two flights each.

As the Berlin situation developed, MATS was forced to go a step further to meet the demands made of it. On July 30, MATS discontinued its domestic transcontinental scheduled routes to release planes for the Berlin shuttle.

From the foregoing, it is obvious that military air transport is inadequate for emergency conditions. In view of this, one would assume that, with roughly $2,000,000,000 to spend for aircraft procurement between them, the air services would be buying transport aircraft in large numbers. A glance at their announced procurement plans, however, reveals the amazing fact that, exclusive of tactical cargo types such as the Air Force's C-119B, the Air Force and Navy will buy only 44 transport type aircraft between them out of fiscal 1949 funds.

Less Than 100 Ordered. The Air Force has ordered only 24 Douglas C-124's—a giant, four-engine, improved version of the C-74; the Navy will receive eight Fairchild R4Q's (twin-engine boxcar cargo plane), six Grumman JR2F amphibians, and two as yet undetermined heavy transports. In addition to these 1949 purchases, the Air Force also has on order 37 Boeing C-97 Stratofreighters and 10 Lockheed C-121 Constellations. The total additional transports of the two air services, then, through fiscal 1949, is less than 100.

There are plenty of plane types already developed, should the Air Force and Navy care to expand in the transport field: the Navy has its 92-ton Lockheed XR60 Constitution, the Air Force has the 100,000-lb.-payload Convair XC-99. In addition, there are a number of commercial models available, such as the Douglas DC-6A, the Martin 2-0-2 and the Convair-Liner.

Perhaps the Berlin situation has brought home to military authorities the need for expansion in the transport field. If not, the next emergency may find us with a strong combat air force, but lacking the equipment to provide adequate air logistic support.

Military Uses of 2-0-2

An initial saving of $70,000,000 can be achieved by buying Martin 2-0-2's in quantity exceeding 750 to meet four distinct military requirements, The Glenn L. Martin Co. tells the Air Force in a brochure prepared for distribution to military procurement officials.

Martin points out that the AF, over the next two or three years, will need 300 multi-engine pilot trainers, 100 navigation trainers, 100 bomber trainers, and 250 two-engine transports.

The 2-0-2, it is explained, can fill all these requirements, and by buying an already-developed plane the AF could eliminate the cost of experimentation, estimated at $400 a pound.

Military Brotherhood

At Washington National Airport last week, Mrs. John L. Sullivan, wife of the Secretary of the Navy, slammed a bottle of champagne against the fuselage of a 92-ton sky giant, and the Lockheed Constitution, the Navy's largest transport plane, became a "ship of the line."

In a preliminary speech, Secretary Sullivan stated that the XR60, as it is known officially, would definitely not participate in the Berlin air lift, as rumor had it. In a burst of generosity, the Secretary said there was no need for it—the magnificent Air Force was doing a magnificent job and everything was magnificent in Berlin.

Sullivan's sweet talk about his brother service may be the opening salvo in a round of syrupy language wherein each service will extoll the praises of the other. The Navy Secretary's speech followed by only an hour a conference between Defense Secretary Forrestal and his sub-secretaries of the Army, Navy and Air Force, in which Forrestal said that the controversial bickering between representatives of the three services (the Air Force and Naval Aviation in particular) had to stop.

Forrestal and his three service secretaries are now engaged in preparing a directive designed to end controversial public utterances by members of the services. A previous directive of this nature had generally been ignored, but the new one will probably have some teeth in it.

Navy Steals Show

General consensus is that the Navy stole the show from the Air Force at the International Air Exposition at Idlewild last week. The crowds were impressed by the Air Force's huge Convair B-36's, three of which flew by in perfect formation in the presidential air review, and the jet fighters drew the customary "oohs" and "ahs". But for the most part the Air Force effort fell a little flat.

The Navy, on the other hand, put on a razzle-dazzle air show, complete with catapult launchings, aerobatics, dive bombing and strafing and a simulated attack and defense of a carrier deck. They even built a carrier deck in front of the grandstand to achieve realism.

The Air Force put on the most dramatic demonstration of the show, but it was quite by accident, and few spectators realized it was not part of the planned program.

Lt. Warren R. Greenlee and photographer Staff Sgt. James A. Trehearn were flying in front of the grandstand taking pictures in a Stinson L-5 at an altitude of 40 feet, when Greenlee banked too steeply and the plane crashed into the ground.

Overhead, a troop carrier Douglas C-47 was about to drop a parachute team as part of the demonstration. Lt. Stanley H. Bear, the team medico, saw the light liaison plane crash below, grabbed his medical kit and bailed out. He landed near the L-5 and administered preliminary treatment, probably setting an all-time record for minimum elapsed time between accident and treatment.

Neither Greenlee nor Trehearn was seriously injured and both were later removed to a hospital. The Air Force solemnly assures us that the whole thing was accidental and unpremeditated.

92-Ton Transport—The Lockheed Constitution, the Navy's 92-ton transport, dwarfs a Lockheed Model 12, pre-war light transport. The 180-passenger plane, known officially as the XR60, has a range of 6300 miles and a top speed of 300 mph. Wing span is 189 feet, length 156 feet. The 10-wheel truck gear distributes the weight of the plane over a larger area, permitting landings on CAA Class 4 airports (4500 to 5500-foot runways).

Berlin Exceeds 'Hump'

The Berlin air lift, now in its eighth week, has assumed monumental proportions, as far as tonnage carried is concerned. The arrival of additional C-54's in Germany has enabled the Air Force to increase its daily lift to more than 2000 tons. This, together with the British effort of 1000 tons daily, represents a daily tonnage level higher than any attained in the famed war-time China-Burma-India "Hump" operation. Furthermore, if the present pace can be maintained, the Berlin blockade runners will top the peak monthly tonnage of the "Hump" operation (71,042 tons, July, 1945) by a wide margin.

Air Force officials are apparently convinced that the blockade will continue for some time, for they are now casting about trying to find some more transports. The official statistic books show a total of 450 C-54's in service but when it comes to putting the finger on them, that's another story. So far less than 100 have reported to Germany, although about 60 more are making preparations to go.

Navy officers have been making a case for seaplane transport out of the Berlin shuttle. Using the giant Martin JRM Mars flying boats as an example, they point out that the Mars, on a short mission such as a Frankfurt-Berlin or Bremen-Berlin run, could carry about five times as much cargo as the C-54's, and 20 times as much as the two-engine Douglas C-47's, and operating expense for the run would be about the same as that of the C-54.

It's a good argument, but there is a flaw in it. The C-54's have been landing at Templehof Airdrome, unloading their cargo and taking off again in less than 50 minutes. With the current scarcity of transport aircraft in Germany, this speedy operation is essential.

Unloading the flying boats, particularly on river water, such as the Havel River in Berlin where the British Sunderlands now land, would take a considerably longer time. The Sunderlands are forced to anchor 200 feet from shore, and they are unloaded by small lighters.

There is no doubt, that the JRM's could make an important contribution to the air lift, should they be assigned to it. There are only five of them in service with the Fleet Logistic Support Wings, however, and one is now undergoing a 5000-hour overhaul.

While we are speculating as to what large aircraft could do in the Berlin operation, how about the Air Force's behemoth Convair C-99? It is designed for a payload of 100,000 lbs. at normal range, which could probably be boosted to 60 tons with the low fuel load required for the Frankfurt-Berlin run of only 225 miles. One C-99 could do the work of six C-54's or 24 C-47's, thereby taking the strain off the overtaxed airport facilities. A landplane, it could be unloaded in only slightly more time than is now required to unload the C-54's. It would take only 33 of these huge transports to match the combined tonnage of the 200 Air Force planes now flying the shuttle.

There's a flaw in that argument, too. There is only one C-99, and no more in construction.

JAMES J. HAGGERTY, JR.

PERSONNEL

ADMINISTRATIVE

Stanley G. Markusen, after two years in TWA's public relations department in New York, has been appointed manager of public relations for all TWA operations in Europe, with headquarters in Paris. **Abdul Fattah Kazamel** has been appointed public relations representative for TWA in Cairo.

Jack Purcell, formerly with the N. Y. Daily News, Time and CBS, has taken over as manager of Capital Airlines' system news bureau, succeeding **L. L. (Bob) Doty,** resigned.

Harold Montee, Washington representative of Seaboard & Western Airlines, has been elected a vice-president of the company. A pilot since 1919 and holder of an A&E license, he has served as a transport pilot, a fixed-base operator, a CAA inspector and an aviation insurance executive.

Carl Anderson has replaced **Carl Kolling,** resigned, as manager of revenue accounting for Western Air Lines.

Martin Bellefond, formerly an executive of Willis Air Service and more recently president of Panama Airlines, has been named vice president in charge of administration of World Airways, Inc.

OPERATIONS-MAINTENANCE

Ray M. Dunn, since 1945 director of maintenance and engineering for TWA's international division, has been appointed to the same position at the Kansas City overhaul base, replacing **R. C. Loomis** who resigned for health reasons. Succeeding Dunn at the international base at Newcastle County Airport, Wilmington, Del., is **Al E. Jordan,** formerly manager of maintenance production. Dunn has been with TWA since 1935, Jordan since 1932.

E. G. Baringer, formerly assistant to the operations manager in charge of stations for National Airlines, has been made superintendent of passenger service. **William F. Bevins,** his former assistant, has moved up to superintendent of stations. **Helen Bowen,** who has served as supt. of passenger service, now becomes chief stewardess, and **Rita Bundy,** who held that job in an acting capacity, becomes a check stewardess. Baringer joined NAL in 1946, after being with Eastern Air Lines for 19 years in various operations capacities.

John Klink, formerly district operations manager for Capital Airlines at both Detroit and Flint, has taken over as head of the company's operating staff at Willow Run Airport. Assisting him as supervising operations agent is **Bob Fricker,** formerly senior operations agent at New York. **Jim Bienlein,** formerly senior operations agent at Flint, succeeds Klink as district operations manager.

Nelson B. Fry
Traffic veteran joins Capital

Samuel H. Miller, a Pan American Airways pilot since 1940 and assistant chief pilot—Europe for the past year, has been appointed chief pilot of the Atlantic Division.

A. A. Arnold, for the past two years chief of passenger station service at La Guardia Field, has been promoted to district passenger service manager at Detroit.

L. C. Hanna, formerly C&S station manager at Indianapolis, has been transferred to Beaumont, Tex., in same capacity, replacing **H. V. Cheatle,** who was transferred to Toledo. **J. R. Willey,** formerly station manager at Toledo, has replaced Hanna at Indianapolis.

E. G. Baringer
Heads NAL passenger service

L. G. Schaefer, former station manager for Eastern in Tallahassee, Fla., has been appointed traffic and sales manager and station manager in Charleston, S. C.

Walter L. Flinn, formerly in Capital's engineering and maintenance department for seven years and with CAA a year, has been appointed an application and sales engineer for Vickers, Inc., of Detroit, a subsidiary of Sperry Corp. and manufacturers of Vickers hydraulic equipment used by airlines.

W. M. Mitchell, foreman in the propeller shop at TWA's overhaul base at Kansas City has been elected to head the TWA Management Club in that city for the next year, succeeding **G. R. Parkinson.**

Henry J. Johnson has been appointed supervisor of air cargo procedures for Eastern Air Lines with headquarters at New York. He joined EAL in Miami in 1940 as agent and was chief cargo agent there before his recent promotion.

TRAFFIC & SALES

Nelson B. Fry has been appointed assistant to the director of traffic and sales for Capital Airlines. He has had an extensive experience in commercial aviation, including 11 years in traffic positions with United Air Lines, the position of acting vice president of traffic for TACA Airways, and the presidency of the Air Traffic Conference of the Air Transport Association.

Henry Fellows has been promoted to manager of sales research and training for TWA, replacing **L. P. Marechal,** who became manager of passenger sales. Fellows was with Air Cargo, Inc., before joining TWA in 1945. **John Logan** replaces him in his former position.

Don Raish, formerly district traffic manager for Continental at San Antonio, has gone to El Paso in the same capacity.

L. Guy Carter, Jr., formerly southern region reservations manager for Braniff Airways in Austin, has been appointed assistant to the manager of reservations and passenger service.

M. E. Merriman, formerly district traffic manager for Northwest Airlines at Seoul, Korea, now heads the new district traffic office of NWA in Hong Kong.

William F. Keefer, Jr., formerly a Dallas traffic representative for Braniff, has taken over as city traffic manager at Wichita Falls, replacing **Lon Davis.**

Gene B. Davis, former Kansas City traffic representative for Braniff Airways, has been appointed district traffic manager at Wichita Falls.

PERSONNEL

Richard W. Goodspeed has returned to United as interline sales manager after being "loaned" for 18 months to Philippine Air Lines in Manila to act as traffic and sales manager—international.

Robert J. Morgan has been appointed to the new post of Orient traffic manager for NWA. With TWA and PCA before the war, Morgan was a lieutenant-colonel on the staff of the Far East Air Service Command just before joining Northwest.

Albert A. F. Murphy has been appointed New York district traffic manager for Peruvian International Airways, succeeding **Luther Kellog**, resigned. Murphy's experience has included sales positions with Waco Aircraft and Eastern Air Lines.

A. G. Gilbertson, former district traffic manager for Continental Air Lines at Tulsa, has been advanced to same position in Kansas City, being replaced in Tulsa by **Bill Cormack**, formerly a Kansas traffic representative.

J. E. Hawthorne has resigned his position as manager of passenger sales for TWA, effective Aug. 1, to become general manager for Allied Van Lines, Inc., in Chicago. He has been with TWA in various traffic and sales positions since 1936.

William L. C. Jones, former convention representative for Eastern in New York City, has been promoted to assistant to **Trond Sundem**, EAL agency and convention manager.

William G. Cann, formerly with Eastern Steamship Co. and the British Ministry of War Transport, has joined Air France as supervisor of agencies for the North American Division.

Thomas P. Gilroy, former traffic and sales manager for EAL in Charleston, S. C., has been transferred to Hartford in same capacity.

James D. Tierney has been appointed manager of agency and interline sales for Peruvian International Airways. He had spent seven years with the traffic division of the U. S. Lines and an equal period with TWA-International before joining PIA last November.

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Jim Boyce, formerly with Lockheed, has succeeded Sol Vorhees as chairman of Babb International, S.A., Geneva, Switzerland. **Frank R. Brine, Jr.**, becomes Babb's assistant publicity and advertising manager. **Jack Geneux** remains manager of the Geneva office, while Babb's new office to be opened in Amsterdam will be under the direction of **Jean Dufour**. The Babb Co. has taken over the Eastern Air Lines buildings at Newark Airport on a 13-year lease.

Airline Commentary

By ERIC BRAMLEY

AT HAND is a letter from Mrs. Anne Snyder, an airline co-pilot's wife who reads our column (thank you, Mrs. Snyder) . . . She wants to share a laugh with us . . . Recently she and her husband and two children took a flying trip west . . . They arrived in Kansas City too late to catch the last plane for Tulsa, and decided to get to that city by train . . . A week or so ago when she was throwing away all the old ticket stubs she discovered travelers' insurance policies purchased by hubby for the train trip . . . Mrs. Snyder, remarking that she got quite a laugh out of it, states: "5,000 miles by air and never a fear, but 250 miles in a train and the airline co-pilot has to have insurance. I guess that's what you'd call airline loyalty" . . . Guess you're right, Mrs. Snyder . . . Your husband evidently likes big iron birds better than big iron horses . . .

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We put on our best disguise and went spying on the Chicago Railroad Fair early this month . . . This fair is to celebrate "100 years of railroad progress" and it's sort of a small world's fair on the shores of Lake Michigan . . . Several airline people have asked us what we thought of it, so we'll say that, in our opinion, it was poorly laid out and poorly run but that nevertheless a lot of the spectators are going to be impressed with the advances in railroading . . . There are a number of trains on exhibit, notably General Motors' Train of Tomorrow, which was attracting large crowds . . . Speaking of this train, we heard one comment to the effect that "Boy, I'll sure ride on that train" . . . And it's a good bet that many of the more than half a million people who have attended the fair so far feel the same way . . .

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We read in TWA's Skyliner some interesting notes about an airline pilot . . . TWA's Capt. Franklin Young recently received his 20-year pin from the company, and the story about him states that he has accomplished two aviation feats which he believes to be world's records . . . "To date he has 1,514:26 hours on the DC-2 and 11,093:38 hours on the DC-3, for a one pilot, one-type plane record," the story says. "By way of setting up an engine performance record, Capt. Young has never been in command of and landed a Douglas plane but that normal takeoff was available on both engines" . . . That, we would say, is interesting . . . (Capt. Young has "graduated" now—he's checking out on the Constellation) . . .

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Clay Irby, Delta's station manager at Lexington, Ky., writes to say that a passenger deplaned from a Delta flight and left a book on the plane . . . Title was "How to Remember Names and Faces," formerly entitled "How to Develop a Good Memory," by Robert H. Nutt . . . The book is supposed to show you how to remember names and faces and how to remember facts and details . . . Says Irby: "Apparently the passenger concentrated so hard that he has completely forgotten the book, as it is still unclaimed as of this date" . . .

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TWA's Albuquerque station is really all out in trying to keep trips on time . . . As soon as a pilot has brought his plane to a stop on the ramp he's handed a mimeographed form . . . It says: 'You have read of the system "On Time" contest and we at Albuquerque are doing everything possible to arrive at 100% on-time departures. Your cooperation is requested in boarding your flight promptly and being ready to start your engines when we give you the signal. Your schedule time off for this flight is (departure time filled in). Thank you" . . . Sounds like a smart idea . . .

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A friend from South America tells us of the international carrier that was flying a passenger trip into Buenos Aires and found Moron, the BA airport, closed due to weather . . . "After milling around for some time the pilot returned to Montevideo, where he had to stay overnight. The next day the pilot turned in an account of the expenses incurred in Montevideo—passenger meals, hotel bills, etc. A few days later the accountant reprimanded him for overnighting in Montevideo, incurring a great deal of extra expense to the company. The pilot explained that it was necessary due to the fact that the field was closed and he couldn't get in. After a great deal more conversation, the accountant said, 'Caramba, what time do they close Moron?' When last heard from the accountant was still trying to determine what Moron's operating hours were" . . .

The Birdmen's Perch

By *Major Al Williams*, ALIAS, "TATTERED WING TIPS,"
Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.

Tomorrow's Air Traffic Control Planned Today

By William D. Perreault

In discussing the possibilities offered by the RTCA air navigation and traffic control program outlined by Special Committee 31, the major question ventured by those concerned has been, "How will they be able to do it?" This question is not promoted by interest in the electronic intricacies of the long range or target system but rather by amazement that all the signals and information necessary can be transmitted to the cockpit instantaneously and displayed there in a manner simple enough to be usable.

The experts are not stumped by this matter and already the details are unraveling. On Aug. 17, Special Committee 41 will submit a report to the executive committee of RTCA outlining the detail requirements of the target system for traffic control. The report specifically states that no attempt has been made to confine the program to detail points (which might hinder the program) but has instead outlined specific operational requirements leaving it up to design ingenuity to determine the best possible manner of accomplishing these ends.

Since the characteristics of the system will definitely influence the ultimate physical appearance of the cockpit display instruments, the accompanying drawings showing possible cockpit instruments are likely to affect final instrument configurations.

Routes & Lanes. The SC 41 report recommends that the air space be divided into routes and lanes. Routes would be numbered from 1 to 999 and lanes would be numbered from 1 to 9. Lanes would further be classified according to altitudes with lanes at 1,000-foot levels. Thus there would be 90 lanes available on a given route within 10,000 feet of altitude. In operation the lanes might be reduced to a smaller number in areas of limited operation. It is anticipated that as few as three lanes may be used in the early use of the system.

Prior to flight the pilot will obtain clearance to fly over a given route. This clearance will include information on altitude, route, lane, speed, etc.

The cockpit display provides digital space for this route and lane number. In the artist's sketch the lane is represented by letter rather than number but the final report specifies the use of numbers. In this illustration the airplane is flying route 27 in lane C. The next line provides a method of establishing the altitude at which the plane should be flying. The last two zeros are not used and in this instance the plane is cleared as above at 16,000 feet altitude. Chicago is the destination of the flight as indicated by the three-letter designation CHI and the airplane speed is to be maintained at 275 miles per hour.

In this manner all pertinent information for clearance is in front of the pilot during the flight. In the event that the ground controller finds it advisable to change the terms of the clearance he can operate equipment which will light the "attention" signal on the instrument, provide an aural warning, and automatically introduce new figures on the cockpit dial. A black dot will appear adjacent to the line of figures which has been changed. The black dots next to the route-lane designation and speed are examples of this action.

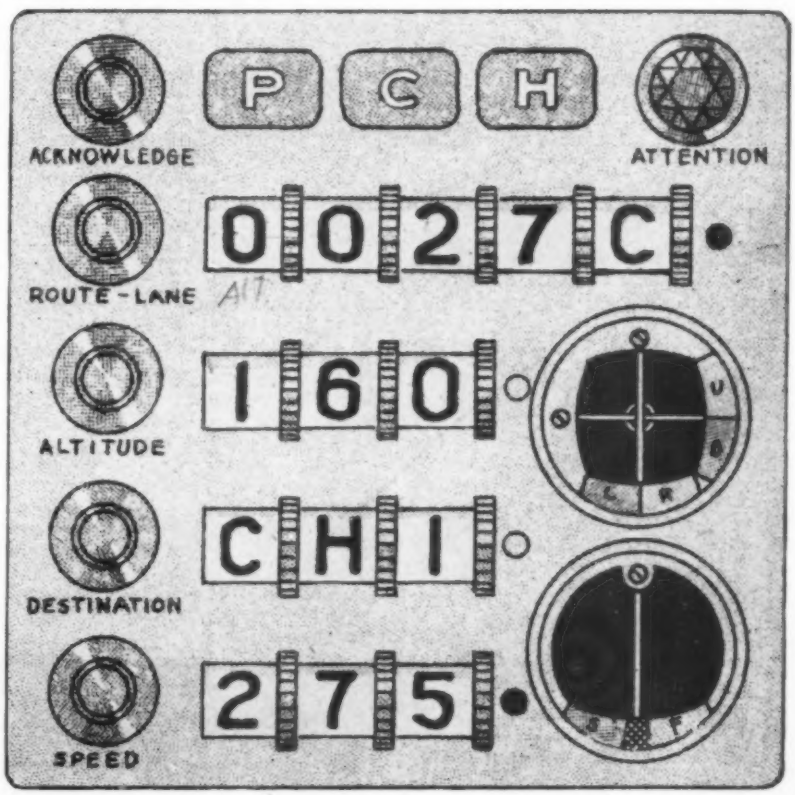
Each airplane would be assigned an inviolable airspace some five miles square and 1,000 feet deep. If another plane entered this space signals would automatically be sent from the ground station to the airplane over private line communications calling the pilot's attention with the signal light and uncovering one of the letter symbols P, C, or H which indicate that the airplane should proceed, change or hold its position. When a change is recommended it is accompanied by instructions indicating the nature of the change such as a new speed assignment, route or lane change, etc.

Changing Clearance. Due to icing conditions, head winds or parallel operational difficulties, the pilot may find it advisable to request a change in clearance. To do this he simply uses the knob adjacent to the digit and "rolls in" a new figure meeting his changing needs. By pressing the button to the left of the line in concern the request is set into the transmitting equipment of the airplane.

Fifteen times a minute the ground equipment automatically interrogates the airplane and during the next cycle the ground controller will receive the request and either accept or suggest an alternate.

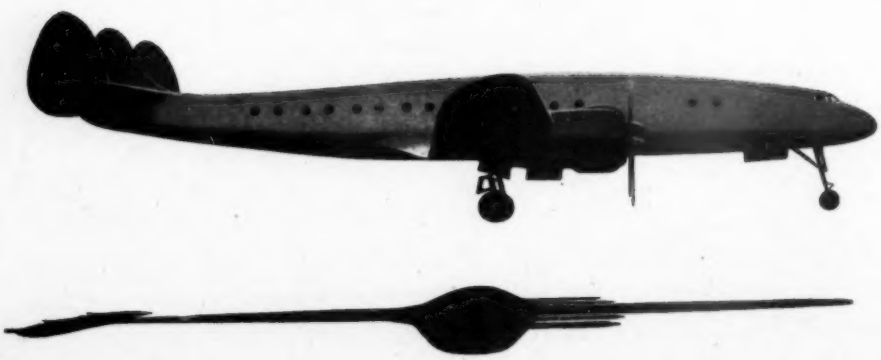
Acceptance requires no further action on the part of the controller, but if he can not grant the request he need only set his equipment to retain the original assignment or a new one and it will appear on the cockpit instrument of the airplane in concern. If the change does not fit operational needs the pilot may initiate another request.

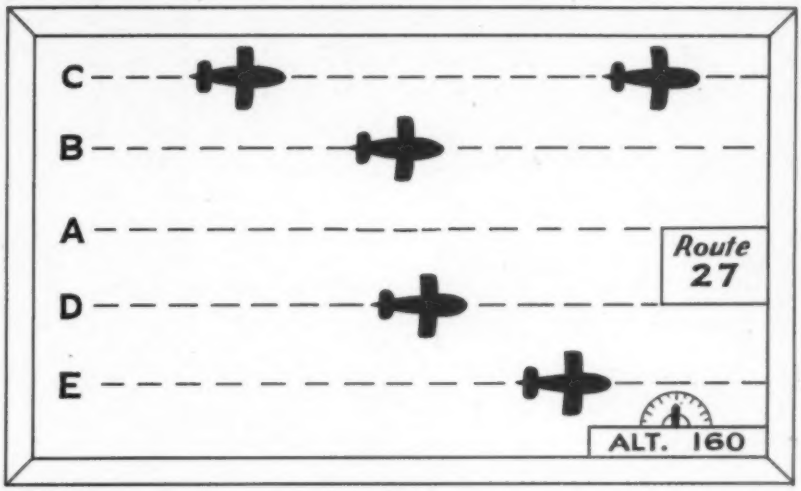
All communications are instantaneous. Information not pertinent to the pilot



Cockpit Indicator—When the target system of traffic control is in effect, an instrument similar to this one will be used to provide the pilot with up to the minute clearance and flow data. The artist's sketch above was submitted to the ACC by CAA as an indication of how RTCA recommendations may be carried out.

TRIED & PROVEN





Cockpit Television?—Supplementing the indicator that will provide clearance data will be a pictorial display showing the pilot the relationship of his airplane to others in adjacent lanes at the same altitude. The lanes are represented by letters in the panel. Conditions above or below the airplane can be shown by using the knob on the panel to select alternate altitudes. Final version will probably be three dimensional.

does not appear on his indicator at any time.

While the airplane is flying en route the pilot has a continuous indication to tell him that he is in his proper relationship to the lane. This is provided by indicators warning him to increase or decrease his speed, go left or right, or up or down.

These facilities will be supplemented by a pictorial display similar to a television screen (see cut) showing the pilot the relative position of the airplanes in his vicinity and on his route. The display would only show the airplanes at the level chosen by the pilot. A knob on the panel would permit the pilot to choose the altitude shown by the display. This would be particularly useful when the pilot is changing altitude. The nature of the picturization has not been specified by the committee report but extensive laboratory studies are being made to determine the best method. Three dimensional displays will probably be used but these might be in the form of radar scopes using pips to indicate planes, television showing actual planes, or some similar known or possibly as yet undeveloped system.

Certain aspects of the system have not been outlined by the special committee. These include designation of station numbers or locations for interrogator equipment. This must be decided upon when the ultimate power of airborne transponder equipment is determined, as this, and possibly military expediency, will be the limiting factor preventing one station from serving unlimited areas.

The report of Special Committee 41 of the RTCA is the result of many meetings of some of the nation's most capable traffic control experts and will offer concrete stepping stones to development of the target traffic control system.

PLANES

Italy's New Transport

Italy's first attempt to enter the postwar airline transport market has been unveiled in the form of the Breda Zappata 308, a four-engined airliner in the Constellation class, produced in the Milan plant of Societa Italiana Ernesto Bredo. The airplane bears close relationship to the Lockheed Connie in appearance and in some phases of speculative operational performance.

Powered by Bristol Centaurus engines of 2470 horsepower, the international version of the airplane will have a takeoff weight of 101,600 pounds and a cruising speed of 260 mph. Maximum flight speed will be 348 mph.

Major differences existing in the BZ 308 as compared structurally with the Constellation are the twin vertical tail members and the single wheels on the main gears. The main wheels are large in diameter but due to gear arrangement the airplane center-section is much closer to the ground than the Connie. The hydraulically retractable gear leaves the wheels slightly extended below the contour of the nacelles.

The flight crew compartment provides for five crew members including the extensive flight engineer panel arrangement typical of its American counterpart. In the BZ 308 the flight engineer panel is on the left side of the flight deck leaving the right side of the fuselage for a navigator's table and radio operator's position.

The passenger cabin is divided into forward and aft sections with 24 passenger seats forward and 31 in the aft compartment. Twin lavatories, coat closets

and a buffet are located rearward. Plans for an alternate cabin layout provide for a saloon bar in a 64-passenger model with the lounge compartment seats facing each other and tables in between the seats. The separate passenger compartment would seat 38 passengers in 10 rows of seats.

The engines are Bristol Centaurus 586 models with two speed superchargers and equipped with Rotol five bladed propellers, 14 feet in diameter. Cruising at a maximum continuous power of 1745 hp at 11,000 feet, fuel consumption of the engines is expected to be .436 lb/bhp hour.

Although no additional planes are in production at this time Ing. Zappata plans on building a pressurized model of the BZ 308 and another model equipped with floats. The floats would be similar to those used on the wartime Cant Z 506 and Z 511.

General Specifications

Dimensions	
Wing Span	138' 1"
Length	109" 110"
Height	Not Released
Engines—Bristol Centaurus 586	
Horsepower at TO	2470
Maximum Cont. HP	2160
Cruising HP	1745
Weights—Trans-Atlantic Version	
Take Off	101,600 lb.
Take Off—Continental version	88,400 lb.
Empty weight	57,500 lb.
Estimated Speeds and Range—Trans-Atlantic Version	
Maximum speed	348 mph
Norman Cruising	260 mph
Range at 260 mph, still air, 9,480 feet altitude	3,100 miles
Ceiling	
Normal at maximum weight	24,300 ft.
3 engine service ceiling	13,100 ft.

BOAC Outlines Plane Plan

What the transport fleet of British Overseas Airways Corp. will look like within the next few years has been outlined by Whitney Straight, the airline's chief executive.

The new BOAC landplane fleet, before the end of 1949, will at least consist of six Boeing Stratocruisers, 11 Lockheed Constellations, 25 Hermes IV and 15 Tudor IV freighters, and 22 Canadair (4M2) transports. In connection with the Canadair, Straight emphasized that BOAC has the fullest confidence in future British types of aircraft but is gratified that the government recognized the urgent need for fleet reinforcement during the interim period and had approved purchase of the Canadian-made planes.

The Hythe and Plymouth flying boats now in service will be retired progressively as the new landplanes take up the load, it was said. The Solent flying boats on the South African route will operate into 1950 and beyond if the financial results justify. The Yorks, Lancastrians and Liberators will be retired in the near future, and use of the Dakotas (C-47's) will be confined to Middle Eastern service.

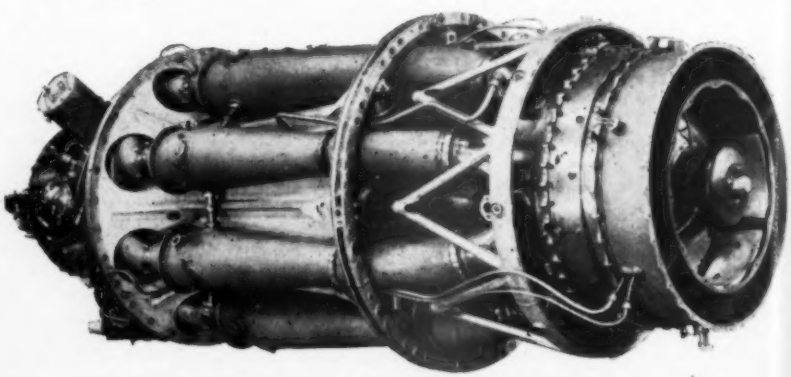
It is expected that by 1953 the de-Havilland jet-propelled Comet and the Bristol 175 will be available. The Brabazon landplanes and Saunders Roe flying boats are not expected to fly in final form until 1953, and future plans for these aircraft will depend on results achieved by prototypes.

41 Convairs Delivered: Consolidated Vultee by Aug. 1 had delivered 41 of the 158 Convair-Liners on order. Deliveries were 29 to American Airlines, 7 to Pan American Airways, 4 to Western Air Lines, 1 to Contintenal.

British Proteus Progresses

Rated as the most important prop-turbine engine in the British development program is the Proteus which will be used to power the Brabazon II and Saunders Roe-45 airplanes. Emphasis on completion and certification of the engine is highlighted by the estimated date for completion of the Brabazon sometime in November.

The 3500 horsepower Proteus is only 37 inches in diameter and has a compression ratio of approximately 7:1. Propeller to turbine ratio is 11.9:1. Although many of the internal parts of the Proteus are the operationally proven units of the Theseus, which recently completed extensive testing, the operating principles of the two engines are widely different with the Proteus ex-



THE BRISTOL PROTEUS, rated at 3500 hp., will power the Brabazon II and Saunders Roe-45

ICY "BLOWTORCH" *to cool the screaming jets!*

When the Douglas *Skystreak* blazed over desert sands to set a world speed mark of 651 m.p.h., a midget AiResearch turbine smaller than a plumber's blowtorch tossed snowflakes into the cockpit!

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A decade ago AiResearch pioneered the field of turbine refrigeration . . . designed and built the first experimental models. Today it is equipping a major share of all jet-propelled airplanes under construction or flying in the United States.

• The engineering "know-how". . . the research and laboratory facilities . . . and the manufacturing skills of AiResearch are now available to you, whatever your field may be.

AiResearch engineers invite your toughest problems, involving high-speed wheels and rotors. Specialized experience is also available in creating compact turbines and compressors; actuators with high-speed rotors; air, gas and fluid heat exchangers; air pressure, temperature and other automatic controls.

AIR POWER US AAF IS PEACE POWER

Write: AiResearch Manufacturing Company, Los Angeles 45, California.

Air Force Day—Sept. 18

AiResearch
DIVISION OF
THE GARRETT CORPORATION

Continental Convair-Liner—Continental Air Lines has received first of its four Convair-Liners scheduled to go into service this fall. It has been undergoing minor modification changes at CAL's Denver base and is expected to start training program for pilots in mid-August. Color scheme will differ from traditional red lettering of the DC-3 fleet, with blue predominating on the large letters and the name reduced to two words 'Continental Airlines'.

pected to provide much lower relative fuel consumption.

The Proteus, manufactured by Bristol Aeroplane Co. Ltd., incorporates new principles which reduce the overall size of the engine considerably. Designed for mounting forward of the air scoop on the wing, the engine routes air entering the plenum chamber at the rear of the engine through axial flow chambers to a centrifugal compressor just aft of the propeller reduction gear box on the nose section. From there it is forced rearward through the combustion chambers, two stage compressor turbine and finally through the free turbine which transmits the power directly to the propeller reduction gear housing.

This design of the free turbine reduces frictional losses to a minimum and simplifies starting by making it possible to use low torque starters geared directly to the forward centifugal compressor. Low inertia necessary to drive the free turbine and associated gearing necessitates a parking brake device to prevent the propeller from windmilling while the engine is inoperative with the airplane on the ground.

Some observers feel that the progress being made with the Proteus contradicts the pessimistic attitude of Sir Roy Fedden in his recent comments regarding the need for concentration on reciprocating type engines for an indefinite period.

CERTIFICATION

Convair Payload Upped

Take off weight of the Convair Liner has been increased from 39,500 to 40,500 by a new CAA approved type certificate issued on July 28. Operating aircraft must have changes made in the brakes and landing gear strut prior to certification at this weight.

Greatest benefit from the new certificate will be experienced at low level airports with a flap setting of 24 degrees. Further increases in weights which will be effective at high level airports may be experienced if requests presently before CAA are granted.

Convair Props Certificated

Final certification of the hydromatic reversible pitch propellers on Consolidated Vultee Convair-Liners has been granted following a rigid flight testing program. The propeller completely reverses in three seconds by means of throttle operated controls.

Hamilton Standard Propellers, Division of United Aircraft Corp., indicated that orders have been received for the propellers from Western, Continental, Pan American, KLM, Orient Air of India, Sabena and Trans Australian. Thirty-six airplanes are included in the group.

DC-3 Cross Wind Gear

The cross wind landing gear developed by Goodyear Aircraft Corp. for use on DC-3 transports has been certificated by the CAA for commercial use. The gear swivels 15 degrees right or left of center making it possible to land on any runway regardless of crosswinds.

British Jet Approved

The de Havilland Ghost has been approved by the British air registration board as the first jet engine certificated for passenger carrying aircraft. Currently rated at 4,450 pounds static thrust, the engine will eventually be rated for 5,000 pounds thrust. The approval carries with it overhaul periods established at 250 hours.

The Ghost engine, which was used in a recent Ghost Vampire flight in establishing the international altitude record of 59,492 feet, will see its first commercial service in the de Havilland Comet. The Comet is now under development for use over the North Atlantic and other routes.

Early in June the U. S. Civil Aeronautics Administration granted similar approval to the Allison J-33 jet engine.

SPECIAL....

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NL 67944

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Ground Operations:

CAL-Braniff Pooling Clicks

If you think something is right, then go ahead and find the solution instead of thinking up a lot of reasons why it can't be done.

That's the philosophy behind the successful ground consolidation program undertaken by Continental Air Lines and Braniff Airways at five stations which they both serve.

Proof that the consolidation plan works is the estimated savings by each company of between $50,000 and $60,000 per year.

Out in Denver recently Lynn H. Dennis, Continental's director of flight service, explained how he and Jack Brough, director of Braniff's ground operations, got the program underway.

"We believe in starting with small stations," Dennis explained. "Originally we consolidated at Kansas City but had to give it up because it wasn't economically successful for Braniff or ourselves. Our flights arrived at about the same time and we couldn't separate the schedules because we were feeding each other connecting business. It just didn't work at a large station.

"But the small stations are working fine. Both Braniff and ourselves are very satisfied. A typical station is one where each line had two men working four flights a day. Now we have an average of three men with better service for less money. We can give more service per passenger through the consolidation.

"The secret is to have one operator. At Lubbock and Wichita Falls, Texas, Braniff handles everything. At Topeka, Colorado Springs and Pueblo, we handle the station."

But the consolidation plan has expanded beyond the original ideas. For example at Pueblo and Colorado Springs, CAL handles Monarch as well as Braniff and its own flights, with 16 flights per day. In addition, Continental provides communication service for Monarch at Denver and Albuquerque, and communications for Challenger at Denver.

At Santa Fe, N. M., Continental handles everything for TWA's four flights a day although TWA handles its own reservations by a direct phone to Albuquerque.

Braniff and Continental handle each other's reservations. At Colorado Springs, where three lines are involved, each airline has its own telephone. But the same man, who happens to be a CAL employee, answers all phones. He gives the inquirer only the times of departures. The competitive angle remains strong because each line tries through its individual selling campaign in Colorado Springs to get the passenger to specify a particular line.

Lynn H. Dennis

Explains consolidation formula

It works this way. If a customer calls and merely asks about departures, the CAL man gives him only the times. But if the customer calls and specifies Braniff, or Monarch, he gets on those particular schedules.

"We have had to fight partiality among employes," Dennis says, "but we have it licked now. Our policy is to tell employes, 'in case of doubt, delay your own company.' This avoids troubles and eliminates suspicions. In the long run this policy works out well for everyone.

"Let competition exist in sales, but keep it out of business."

Dennis said there was no pat formula to go on when Braniff and CAL got together to work out consolidated stations. "Instead of thinking up reasons against it, we just decided to do it, we started it, and worked out a formula on the basis of experience."

Each company bought the other's ground equipment at book value. It was a clean-cut deal with no squabbles resulting from maintenance of each other's equipment. There is a sliding scale of so much per schedule per month with the simplest kind of bookkeeping. Charges are based entirely on number of schedules.

Braniff does all maintenance and turn-around servicing of CAL planes at San Antonio, and CAL does the same for Braniff at Denver, all on flat fees per schedule per month.

Dennis believes all airlines will have to do more and more station consolidation to cut down operating costs. In his own case, each company absorbed the other's personnel and absorbed seniority, vacation rights, and the like. A lot of training was required at the start, but the consolidated station employes apparently like the plan. For one thing, they get more money because there's more work to be done.

Biggest headache unsolved to date is the lack of standardization of forms. At Colorado Springs and Pueblo the men have to learn three sets of loading forms, passenger check-in forms, accounting forms, and the like. "It's just three times as hard as with a standard form. There must be a 'best way' and we'll find the answer somehow."

Dennis is an old-timer in the business. He was with TWA 1936-39, Capital (then PCA) 1939-41, Northeast 1941-42, then in the Navy, and joined CAL in 1945. He started in the business with Pan American in 1934 with the first trip in the Pacific to lay out the trans-Pacific route.

What CAL and Braniff have proved is that station consolidation works in service and economy at small stations and that competitive selling is not handicapped by the business-like pooling of ground services.

SAFETY

Banking After Take-Off

Present regulations forbidding air carrier aircraft from banking immediately after take-off until a minimum altitude of 500 feet has been reached will be eliminated if the CAB accepts the recommendations made by its Safety Bureau.

Although originally intended to limit aircraft maneuvers at low altitudes the present ruling often makes it necessary to fly low over congested areas when it might otherwise be avoided. With increasing air traffic and resultant complaints about aircraft noise the Safety Bureau feels that this requirement can be eliminated without adverse affect since other provisions of CAB provide adequate safeguards against unnecessary aircraft manuevering.

CAB Accident Report

NWA in Alaska: Failure of the pilot to see Mt. Sanford a 16,208-ft. peak in the Wrangell Mountains in the southeastern portion of interior Alaska, was cited by CAB as the probable cause of the Northwest Airlines DC-4 crash on Mar. 12, 1948.

Enroute from Anchorage, Alaska to Edmonton, the normal route utilizes the Gulkana Airway which is deflected 23 degrees northward to avoid Mt. Sanford. The CAB report speculates that the pilot chanced contact flight feeling that he could see Mt. Sanford. The aircraft crashed into the mountain at 8500 feet altitude and came to rest in a glacial cirque which was inaccessible to investigators. General investigation revealed that brilliant aurora borealis lights may have combined with light clouds over the mountain top to obstruct the pilots' vision.

Routine operation and radio contacts indicated that the airplane was functioning properly, and the point of contact on the west slope of the mountain tends to support CAB conclusions.

CAA Violation Reports

Following a recommendation of the Air Transport Association, the CAA will incorporate new procedures for reporting violations of regulations by airline personnel in their Aviation Safety Manual of Procedure on Violations, a manual used as a guide by all regions in handling violation reports.

Formerly, the agent reporting a violation did not inform the person or the airline concerned and the first official notice of violation received by either the employer or employe was a letter from CAA in regard to action to be taken in the matter. Since this often occurred several months after the reported violation it was difficult to verify or disprove the complaint and in some instances, where the airline discovered the violation by other means, they had taken disciplinary action toward the employee.

Under the new system both the airline and the employee will be notified of the violation immediately and disciplinary steps taken by the airline will be considered in formulating CAA action.

More Fire Prevention

A mandatory note is soon to be issued requiring replacement of existing aluminum or composition combustion air ducts on the DC-4 heating system with corrosion resistant steel ducts.

Several operators have reported instances in which the combustion flames from within the heater have backed up into these ducts and caused fires which were extinguished before any appreciable damage was done.

Industry comments have been favorable to the proposed mandatory note and it will soon appear in final form.

Dual Packet Wheels—The third type of gear arrangement to be used on Fairchild's Packet series (this one will be the C-119B) is represented by the dual wheels shown in the artist's sketch above. The landing gear, which carries dual wheels and 45 inch diameter tires, will be constructed by the Cleveland Pneumatic Tool Co. Both single wheel and track type gears have been used on earlier models.

SAFETY SLANTS

WE ARE all familiar with the static grounding cables used as a safety measure when refueling aircraft with gasoline. These wires act in much the same way as lightning rods on a building and the static charges generated by the flow of the gasoline drain harmlessly away to the ground.

The need for such safety cables will apparently continue even with high flash point fuels, such as may be used in jet engines, or the so-called "safety fuel," which is technically, though not economically, possible now.

These liquids are reported to generate static charges to an even greater extent than conventional high octane gasoline. This is probably due to their somewhat higher viscosity and the greater friction which results. Fuel company engineers and fire protection experts warn that failure to realize this characteristic could be dangerous. By the way, how faithfully are you following grounding procedures now. Better check up.

•

Should mechanics be permitted to taxi airplanes? Not according to Thomas L. Grace, v.p. of operations of Slick Airways. He's made it an inflexible rule that only pilots may taxi planes under their own power and when mechanics find it necessary to move a ship for any purpose they are required to get out tractor and tow-bar. Grace makes a good case for this policy by pointing out that Slick has had just one instance of damage to an aircraft in a taxiing accident and it was very minor.

Taxiing accidents seem inexcusable, yet they happen with too much frequency. The prize example, probably, was one at the Chicago Airport just the other day. A mechanic taxiing a DC-6 ran into another DC-6 and another mechanic, at the wheel of a gas truck, got so absorbed in watching the two DC-6's collide that he banged the gas truck into a third one. Not only were three DC-6's damaged, but the airline involved had to cancel out a schedule for lack of equipment.

•

A Chicago-New York flight recently had to go to Washington because of below minimum conditions around New York. Traffic delays brought it into the National Airport an hour and a half late and one passenger, evidently on his first flight, kept inquiring of the stewardess about the sufficiency of the gasoline supply. He nearly fainted when, after the engines had been cut at the airport ramp and the plane was being turned by a tractor, some wag aboard remarked, "Holy smoke, we just made it. He didn't even have enough gas to turn the ship around!"

—NEW EQUIPMENT—

Goodyear Gasoline Tube

A new static conducting, synthetic rubber, gasoline hose tube has been developed by B. F. Goodrich Co. Weighing about nine ounces, the nozzle tube is made in 1⅛ inch size with 16 or 24 threads to the inch and in 1¼ inch size with 18 threads to the inch.

Insuring instantaneous grounding at every point, the new hose will not mar finishes, damage pump panels or otherwise do damage common to metallic tubes. The new tube, which has been approved by the Underwriter's Laboratories, will outlast metal nozzles two to one, according to the manufacturer's field tests. Detail information regarding the tube is available from Goodrich at Akron, Ohio.

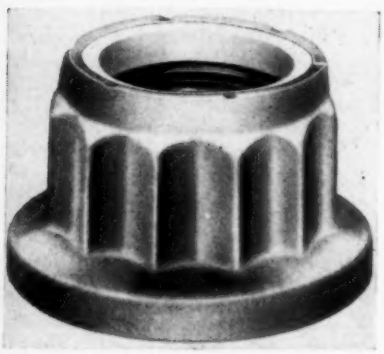
RCA Klystron Tubes

Klystron tubes, a new product of Radio Corporation of America are available to the commercial market for use in microwave relay and multi channel communications equipment. Other applications in aviation include airport traffic control systems, micro-wave direction finding devices, terrain clearance indicators, and obstacle and collision devices. These applications are facilitated by the ability of the tube to detect objects in the path of the transmitted beam. Klystron tubes may be used to transmit or receive microwave signals.

Additional information is available from Radio Corporation of America, RCA Victor Division, Camden, N. J.

Elastic Stop Nut

A double hex elastic stop nut which is 66% lighter and 50% less high than conventional nuts has been announced by ESNA. The forged steel body of the



nut is cadmium plated and uses nylon in the locking collar. Bearing surfaces are within 1 degree of being square with the axis of the threads on nuts under ½ in. and within ½ degree for nuts 9/16 in. and larger. The nut is designed to develop 185,000 psi minimum in NAS high strength aircraft bolts. ESNA claims particular usefulness for this nut in applications where the dimensional advantages will permit smaller fittings, forgings, and similar assemblies.

Prices and product data sheet may be obtained by writing to Elastic Stop Nut Corp. of America, 2330 Vauxhall Road, Union, N. J.

Seven Acres for Engines—Pan American Airways' engine shop at Miama International Airport covers seven acres of floor space. It occupys one of the nine buildings leased by PAA to house its maintenance and overhaul facilities, executive and traffic offices, ground and flight schools, chemical laboratory and warehouses. PAA recently placed its huge Miami overhaul base in full operation.

All-Steel Crash Axe

A one piece, all-steel crash axe with insulated handle has been placed on

the market by Air Associates, Inc. of Teterboro, N. J. The axe is 15" long and weighs 2½ pounds. It was designed for the U. S. Air Force as part of the emergency equipment carried on all aircraft.

Lucite Washbasin

Durable Formed Products, Inc. have announced a new washbasin, formed of Du Pont Lucite, available in a wide range of colors, and weighing only 7½ pounds. The basin is shatter resistant, chipless and immune to stains caused by food acids and most chemicals. The manufacturer will design the washbasin to meet the specifications of the buyer. There is no additional cost for the various colors. Complete data on this product are available on inquiry to Durable Formed Products, Inc. 6 Greene Street, New York, N. Y.

Rotary Hand Pumps

Three new rotary hand pumps have been announced by the Industrial Pump Division of Bowser, Inc., Fort Wayne, Ind. The model 3003 is a 10 g.p.m., crank operated barrel pump equipped with a 7½ inch diameter drip pan cast integrally with the bung attachment. A brass screen excludes foreign matter from the overflow which runs back into the barrel. The section pipe, beveled on lower end, is ¾"x40".

Model 3008 is identical except that an eight gallon, 4½" dial is mounted between the pump and spout. The meter measures the quantity pumped and has a totalizer reading to 9,999 gallons.

Model 3007 is similar to 3003 except that the bung attachment is adaptable to either 1½ or 2 inch pipe openings.

Cherry Rivet Kit

A Cherry Rivet aircraft repair kit has been placed on the market by Air Associates, Inc., Teterboro, N. J. at a price of $75. Kit consists of 400 Cherry rivets in two head styles, three diameters and various lengths; hand gun; stem trimmer; six different pulling heads; three oversize hole gauges, material thickness charts and three high speed twist drills. Made up to meet CAA requirements covering dimensional requirements of replacement rivets, the kit is packed in a redwood box measuring 10"x5"x4".

WILCOX - First Choice of PIONEER Air Lines

PIONEER EQUIPS GROUND *STATIONS WITH Wilcox Type 378A Package Radio

PACKAGE DESIGN SPEEDS YOUR INSTALLATIONS The Type 378A is *complete* from microphone to antenna, ready for connection to power mains. It is designed for aeronautical VHF ground-air communications at smaller traffic centers.

PROVEN COMPONENTS INSURE QUALITY AND PERFORMANCE—The Type 305A VHF Receiver and Type 364A VHF Transmitter (50 watts) are the principal components of the 378A. Long used separately and field-tested by leading airlines, these units are now available in package form.

NEW AIDS TO CONVENIENT OPERATION The telephone handset with its convenient push-to-talk button, serves as both headphone and microphone, with an auxiliary loudspeaker for incoming calls. The 378A includes desk front, message rack, and typewriter space—there are no accessories to be added.

LOCAL OR REMOTE CONTROL—If desired, the control panel can be removed and the 378A remotely controlled, either by re-installing the panel at the operating position or by simple adaptation to your existing control equipment.

**Pioneer aircraft are also 100% equipped with the new WILCOX Type 361A Airborne VHF Communication System.*

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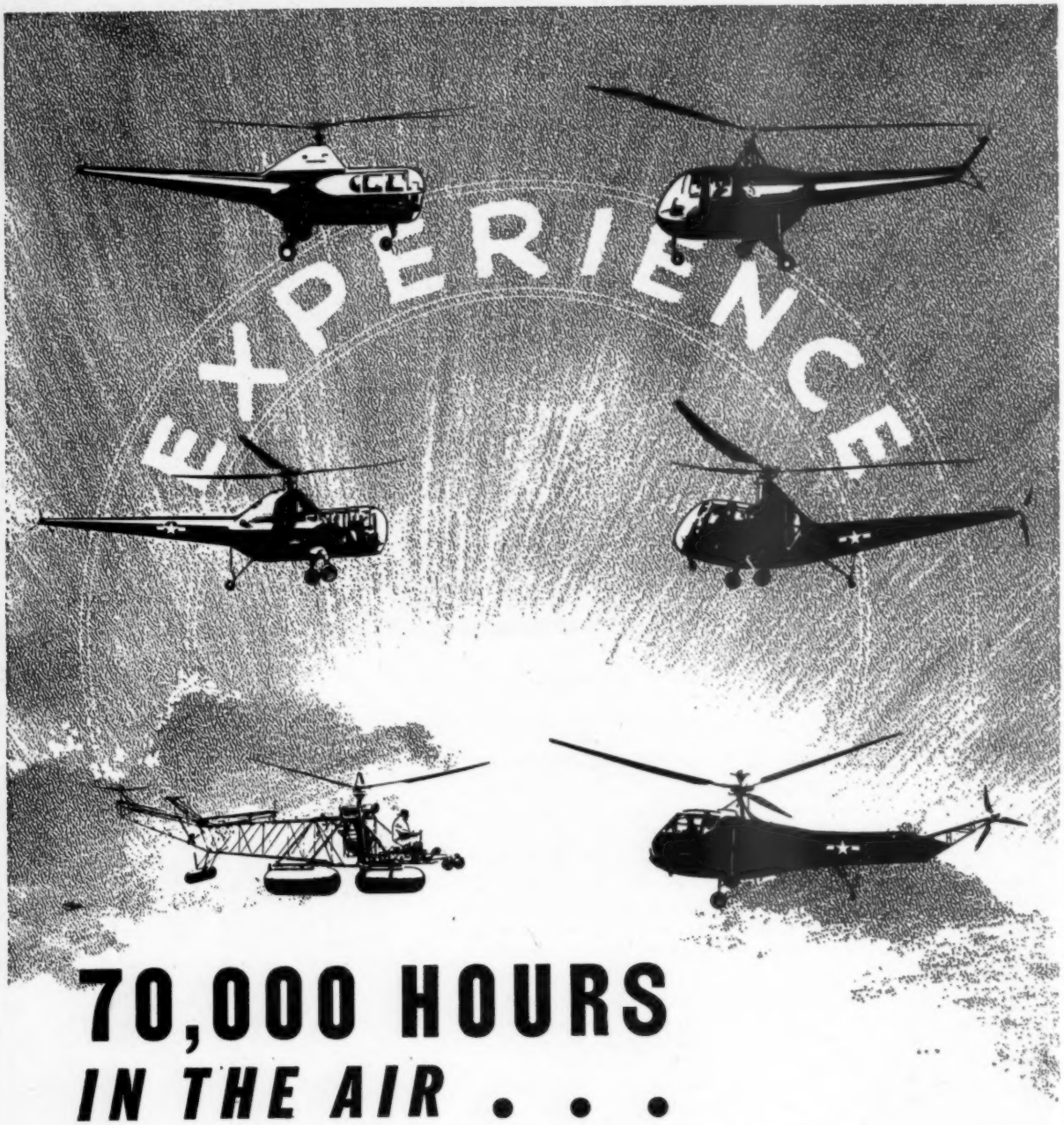

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SIKORSKY AIRCRAFT

BRIDGEPORT, CONNECTICUT

ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

Airline Trouble at Logan

In view of the prideful emphasis the Commonwealth of Massachusetts places on the word "International" in referring to its $53,000,000 Logan International Airport just across the river from Boston, recent treatment of three of the international airlines using the field seemed a little strange.

The three carriers—American Overseas, Pan American and TWA—in late July were peremptorily ordered by the State Board of Public Works, then in control of the airport, to vacate space they had been occupying in the Air National Guard building at Logan.

The Guard had been pressing for the space, but the airlines had asked for a "reasonable" time in which to find other quarters and had fully expected to remain where they were until completion of a new "international wing" of the apron building now being constructed as a part of the new permanent passenger terminal.

Complicating matters was the fact that the order was one of the last acts of the Board of Public Works before turning control of the airport over to a new Board of Airport Management composed of prominent businessmen and a Commissioner of Airports, Philip H. Theopold, a real estate and management expert.

Conferences were immediately arranged between an airlines negotiating committee and the new airport management, but the latter did not feel it could rescind the action previously taken by the Board of Public Works, although it was sympathetic to the airlines' views and expressed a willingness to help them with their problem.

Temporary Solution. As a makeshift, the three carriers moved into the already crowded old administration building to share quarters with Air France and Trans-Canada Air Lines, and began to process their passengers at the domestic counters in the temporary terminal building, which also is crowded. Then they hit upon the idea of taking over an old hangar on the field and equipping it as an interim overseas passenger terminal at their own expense, but here they struck a legal snag in a ruling from an assistant attorney general that an estate holding an interest in the hangar would first have to relinquish all claims to its interest.

The new "international wing" would provide the real answer to the problem, but there was a question as to when it would be available for occupancy. The contractor has promised to complete the building by Labor Day, but there was faint hope that plumbing, heating, lighting and other necessary facilities would be available before winter sets in. Feeling of the airlines was that it was "possible but not probable" that they could move into the new building this fall.

Meanwhile, they have other matters to discuss with the new airport management, such matters as fair and uniform landing fees and space leasing arrangements. The airport board has indicated that the latter need to be completely revamped. The airlines hoped this didn't mean trouble.

Cleveland Terminal Plan

Passenger terminal facilities at Cleveland Municipal Airport, like those at many another, have long since become inadequate to handle present volume of traffic properly, to say nothing of expected future volume. Two weeks ago, the City of Cleveland found out how the situation could be remedied, and probably without cost to taxpayer.

A comprehensive report prepared by the New York aviation consulting firm of Charles A. Rheinstrom, Inc., recommended that Cleveland immediately undertake a program to provide a modern passenger terminal, with airplane loading apron, access roadways and automobile parking facilities.

Costing an estimated $4,500,000, the program could be completed by the end of 1950 and would serve expected airport traffic at least through 1960, possibly much longer.

Construction costs of the new terminal, the consultants said, could be financed by general obligation bonds of the city, with interest and principal to be paid solely from depreciation accruals and net operating income of the passenger terminal area of the airport. By taking full advantage of potential concession revenues, they added, the project could be made self-supporting and self-amortizing within a few years.

The proposed terminal would consist of a modern four-story central building and two one-story concourses connected to it by bridges. The first-floor plan features a main lobby with an information center, and along one side eight airline ticket offices, a parcel check room and space for various concessions, such as a newsstand, specialty shop and telegraph office. A restaurant, coffee shop and cocktail lounge would occupy the most convenient and most conspicuous location at the airport end of this floor. The second floor would include a spectators' lounge with a view of the airport and would provide access to the roofs of the concourses, which also would be used by spectators, with a small admission fee.

The third floor provides offices for the Weather Bureau and CAA and offices for the Commissioner of Airports and his staff. In addition to the main lobby, the ground floor provides space for the handling of mail, express and air freight carried in passenger planes, and also provides for a kitchen, an employes' cafeteria and some concession space.

A paved area around three sides of the building affords access for trucks and other vehicles. The concourses provide adequate space for the processing of passengers and for airline operations offices. The building itself will cost an estimated $2,900,000.

The capacity of the buildings and facilities recommended for immediate construction is based upon a careful forecast of the volume of air passenger traffic and the number of visitors expected at Cleveland Municipal Airport from 1950 through 1960. However, the plan makes provision whereby the building and facilities may be expanded to double their initial capacity, if necessary, or any one of the major components may be enlarged without disturbing the others.

Mayor Thomas A. Burke, Airport Commissioner Jack Berry and other Cleveland officials are giving the plan careful study, and it is just possible that action on the report may be taken this year, inasmuch as a $5,000,000 bond issue for the airport is included in a capital improvement program to be submitted to Cleveland voters this fall. The city paid $25,000 for the survey.

MATS to Leave WNA

For some time, the Civil Aeronautics Administration, subsequently joined by the Washington Board of Trade, had been urging that all military air operations at Washington National Airport be moved to Andrews Air Force Base in nearby Maryland in order to relieve air traffic congestion at the commercial field, but to no avail.

The Military Air Transport Services, reluctant to make the move, stalled.

A fortnight ago, the Air Force settled the matter in favor of civil aviation, ordering MATS to move to Andrews "as soon as possible."

Defense officials estimated it would be nearly three months before the move could be accomplished, however, because of certain contingencies. The MATS removal to Andrews would have to wait upon the removal of the Strategic Air Command, which, in turn, would not be able to move to its new headquarters at Offutt Air Force Base, Omaha, until that base is vacated by the 10th Air Force. The latter is to move to Fort Benjamin Harrison, at Indianapolis, as soon as the transfer of the fort from the Army to the Air Force could be completed, which would be about Oct. 1.

Then, for the first time, Washington National could devote all its facilities and attention to the airlines and private and itinerant flyers.

Smokestack Fight Goes On

Last week, the Civil Aeronautics Administration seemed assured of a tactical victory in another matter affecting Washington National Airport.

The city officials of Alexandria, Va.,

AIR TERMINALS

piqued over the alleged noisiness of planes approaching National Airport from the south, had flatly rejected CAA requests that they deny a permit to the Braddock Light & Power Co. for erection of a 194-foot smokestack just outside the approach glide path. Then it was discovered that another Federal agency, the Dept. of Interior, could block erection of the new power plant simply by refusing to grant the company a right of way over National Park property for its conduits.

With Interior sympathetic to CAA's views, it appeared likely that the power company would back down from its previous position and consent to a compromise to build the smokestacks nearer the 162-foot maximum which CAA considered consistent with safe operations under instrument conditions.

Airport Hotel Approved

Several of the remaining steps needed to make Miami International Airport one of the largest and most modern in the world were taken in swift succession this month by the Dade County Port Authority.

The Authority gave final approval to plans for a $2,000,000 hotel, signed leases on facilities at the field that will bring in $2,000,000 in revenue in the next 20 years, announced negotiations for removal of the Seaboard Air Line Railroad tracks and shops which bisect the field at present, and authorized Port Director A. B. Curry and Attorney J. Mark Wilcox to seek help from the RFC and other Federal agencies in financing the program.

The county will issue $3,000,000 in self-liquidating bonds, which will be bought by the Skyways Hotel Corp., headed by Warren C. Freeman and others. One-third of the money will be used for new terminal and administration facilities, and the remainder to build a 150-room soundproof, air-conditioned hotel. The bonds will be paid off from hotel income. Construction of the hotel will be started as soon as the track removal program is completed.

S. F. Bond Issue: The Public Utilities Commission of San Francisco is proposing to place an $8,600,000 bond issue on the ballot in November for purposes of completing work on San Francisco airport. Voters, by 5 to 1, passed a $20,000,000 airport bond issue only two years ago. Increased costs since then have made this sum inadequate to carry out full construction plans. The estimated cost of a new terminal building, for example, has gone up from $3,500,000 to more than $4,500,000.

Improved Approaches Needed: At least 60% of airports now in use by daily scheduled air carriers are in need of improved highway aproaches, Jennings Randolph, president of the Airport Division of American Road Builders Association, declared recently. Effective use of airports was said to be seriously affected by lack of properly developed access highways.

Selling Air Parcel Post

The certificated domestic airlines were getting set last week for one of the greatest cooperative efforts in their history—the publicizing and selling of the domestic air parcel post service which is due to be inaugurated Sept. 1.

Directing the campaign, which will open with a national publicity program on the inaugural date and continue for several weeks thereafter, will be an Air Transport Association air mail subcommittee headed by Bill Henry, assistant director of public relations for Capital Airlines. Other members are John J. Hart, superintendent of postal service for United Air Lines, and Ben Sherwood, superintendent of air mail for American Airlines.

Assisting the committee in an advisory capacity will be M. F. Redfern and Frank Macklin, of ATA, Second Assistant Postmaster General Paul Aiken, and the ATA Public Relations Advisory Committee.

According to Henry, the campaign will be patterned somewhat after the one conducted last spring to publicize the 30th anniversary of the inauguration of air mail service, except that it will be larger in scope. Media to be used for the dissemination of information will include:

Eye-catching posters, some 40,000 of which are being printed for display on postal trucks and in the lobbies of post offices throughout the country.

Radio spot announcements, which will be transcribed under the committee's direction and platters sent to postmasters in about 600 cities for distribution to radio stations.

Newspaper co-op advertisements proclaiming the new service, and airline advertising carrying plugs for air parcel post.

Air parcel post stickers and red-white-and-blue binding, which will be distributed to post office and to shippers for ready identification and expedited handling of air parcel post shipments.

Little Cost to ATA. The entire program is not expected to cost ATA more than $6,000, but the publicity to be obtained will be worth many times that sum. Key to this economy lies with the Post Office Department, which is interested because it will be adding a new service to the public without making a large outlay of money.

Special kits are being prepared for distribution to postmasters of all first, second and third class post offices, telling them the various ways in which they can promote air parcel post and thereby benefit themselves, since their compensation is based on the gross revenues of their offices.

Postmasters will take platters to their local radio stations; postmasters will see that the air parcel post posters are prominently displayed on their trucks and in their post offices; they will make checks of bulk mailing matter and in cases where mail can be sent by air parcel post at no more or perhaps less cost than via regular mail, they will so advise the firms doing the mailing; they will issue statements to the local press explaining how air parcel post works and what its advantages to the public will be.

Meanwhile, the Post Office Department is giving attention to problems air parcel post may raise with regard to handling space at airports and transportation between airports and downtown post offices. On the latter count, it is felt the present fleet of postal trucks will be adequate to handle the air parcel post, at least for the first year.

As to airport receiving and dispatching space, it is believed this will be adequate at most airports, although the parcel post may conceivably create congested conditions at principal shipping points such as New York, Chicago and Los Angeles.

In the latter event, steps will be taken to acquire additional space, for the air parcel post bill contains a proviso that Post Office may lease space at airports when necessary.

As for the airlines, their feeling is that domestic air parcel post initially will present them with no special problems. Present ground crews and equipment should be able to handle the loading and unloading of the parcel post mail along with regular air mail, and most planes now have sufficient space available in their cargo compartments for several pouches of parcels.

Rail Traffic Down More Than Air

Passenger volume on the certificated domestic airlines during the first four months of 1948 was down slightly compared to the same period last year, but rail traffic underwent a greater slump, and ratio of air to rail travel moved upward.

The domestic airlines (feeders included) flew 1,680,145,000 revenue passenger miles during the four-month period, a drop of 5.2% from the 1,773,085,000 revenue passenger miles in the comparable 1947 period, according to reports filed with the Civil Aeronautics Board.

However, records of the Interstate Commerce Commission show that the Pullman revenue passenger miles for the January-April period this year totaled only 4,269,282,000, about 10.7% less than the 4,782,581,000 total in 1947's first four months.

Class I railroads (exclusive of commuter traffic) operated 11,267,827,000 revenue passenger miles, as against 12,590,745,000 in the first four months of last year, a decline of 10.5%.

The airline traffic represented 39.4% of Pullman volume and 14.9% of Class I railroad passenger miles, as compared to 37.1% and 14.1%, respectively, in the comparable 1947 period.

The accompanying table tells the story:

Month	Domestic Air (000 omitted)	Pullman (000 omitted)	Ratio Air to Pullman	Class I Railroads (000 omitted)	Ratio Air to Rail
January	401,902	1,201,537	33.4%	3,225,453	12.5%
February	357,204	1,048,104	34.1%	2,720,320	13.1%
March	436,690	1,044,756	41.8%	2,752,090	15.9%
April	484,249	974,885	49.7%	2,569,964	18.8%
1st 4 mos. '48	1,680,145	4,269,282	39.4%	11,267,827	14.9%
1st 4 mos. '47	1,773,085	4,782,581	37.1%	12,590,745	14.1%

NWA's 1st Year in Orient

To open up a new 15,000-mile international air route and operate it in the black during its first year is an unusual feat in these days of high airline operating costs, but such is the record to which Northwest Airlines could point on the first anniversary last month of its route to the Orient.

The route was opened July 15, 1947, and by the end of its first year appeared, with May and June revenue and expense figures incomplete, to have shown a net operating income of better than $200,000. For seven of the 12 months, the Orient operation was in the black, and not since January has it shown an operating loss.

It should be said at this point, to Northwest's credit, that the company had expressed optimistic views about the route before it ever opened and had gone on record as predicting that it would be a profitable operation. Events proved, if anything, that the company had been a bit conservative in its estimates.

Figures compiled for AMERICAN AVIATION by the company show that with 97,020,060 available seat miles flown and 47,780,458 revenue passenger miles flown on the route to Alaska and the Orient between opening of service last July and June 30 of this year, the passenger load factor for the route was 49.25%. The number of revenue passengers carried was 24,259—an average of more than 2,000 a month.

During the same period, the line carried more than 750,000 ton miles of

freight and nearly 1,200,000 ton miles of mail on its Orient flights. Total available ton miles of capacity flown was 14,059,608, of which 7,027,367 revenue ton miles —or 49.98%—were used.

Revenue miles flown on the route during the 12 months numbered 3,878,563. The performance factor—percentage of scheduled miles completed—was 98.32%, which is exceptionally high. In fact, from an operations standpoint, Northwest has found the North Pacific route to be better than its domestic route.

A substantial portion of the revenues on the Orient route came in the form of payments for the transportation of some 875,000 pounds of air mail, but passenger revenues of the route amounted to approximately $4.5 millions and air cargo revenues totaled more than $400,000.

Croil Hunter, president of Northwest, is encouraged over the Orient route's progress to date and its prospects for the future. For most of the first year the route was operated, pleasure travel to the Far East was not permitted, and exchanges of goods between U. S. and Japanese firms was forbidden. Recently, Japan was opened to limited pleasure travel, Japanese businessmen were permitted to bring samples to this country, and U. S. businessmen were allowed greater freedom of operation in the Orient.

Northwest recently stepped up its flights over the route from three to four weekly, and is planning a weekly all-cargo flight for the near future.

Delta's New Sales Contest

Delta Air Lines is sponsoring a new sales contest, ending Nov. 30, with station quotas set lower than those for the previous contest, which ended May 31. A feature of the new contest is a provision which permits the winning of cash bonus prizes each month by stations exceeding their assigned quotas for that month.

Although no station made its quota in the previous contest, John Delafield, passenger traffic manager, said the company felt some "very worthwhile results" were achieved. These included:

A number of stations produced excellent ideas for greater effectiveness in sales activity. New interest was taken in providing the kind of service that makes "repeaters" of customers and causes enthusiastic word-of-mouth advertising of Delta's services.

Teamwork between Operations and Traffic and between the line's various offices and stations improved greatly as it became evident that cooperation was necessary if best results were to be obtained. Individual capabilities were brought to light and the general efficiency of many offices was increased.

"In these ways, and in the enthusiasm with which the contest was undertaken, we feel a substantial amount of good—much more than enough to offset the administrative cost and effort of running the contest—accrued to the company and to our employes," said Delafield.

Lost & Found—Absentmindedness among air travelers seems to be on the decrease, according to D. F. Magerrell, v.p.-passenger service for United Air Lines. Only one-tenth of 1% of UAL passengers now leave possessions behind, compared with nearly one-half of 1% a few years ago. However, total number is still considerable as shown by this sampling of 1,200 items currently in UAL's lost and found department at Denver. Some 500 similar articles were returned to their owners last year through efforts of department sleuths, such as Marie Capuano above.

WAL Promoting Convair

With part of its fleet of Convair-Liners scheduled to go into service Sept. 1, Western Air Lines has begun its promotion program, which includes a series of courtesy flights being given consecutively at each city on the WAL route system. The final demonstrations will be given at Los Angeles the last week in August, just before the ships go into service.

To call attention to the Convair's speed, Western ran a preview flight from San Diego to Seattle, with intermediate stops at Los Angeles, San Francisco and Oakland, on a block-to-block schedule of 312 minutes, a 78-minute saving over current DC-4 schedules. Western has 10 of the new twin-engine transports on order, three of which have been delivered.

The Vanishing Agent

It was bound to happen. An opportunist who blithely set himself up in business as a ticket agency for non-certificated air carriers by renting desk space in a downtown Los Angeles, installing a telephone and advertising in the papers, just as blithely folded up the enterprise by closing the desk, disconnecting the phone and departing for parts unknown.

How much he departed with is unascertainable, but one non-certificated carrier admitted he owed several hundred dollars on tickets he had sold, but failed to remit. And a ticket purchaser, seeking a refund on one of the tickets from the carrier on which it was issued was told by the carrier that it was not responsible for tickets sold by agencies and was refused the refund.

At last reports this purchaser was still out the $113.85 paid for the Los Angeles-New York ticket.

EAL's 'Baseball' Contest

Eastern Air Lines employes have become avid baseball fans as a result of the twist put on the company's latest sales campaign, which takes the form of a baseball season in which the 85 EAL cities have been grouped into eight leagues.

The schedule of games within each league has been so arranged that each city plays a "game" a week from Aug. 1 through Oct. 31. Each day is considered an inning and there are seven innings per game. All personnel who contact the public—counter agents, porters, reservations agents and others—are considered players. A certain number of points goes with each sale made.

Prizes will include valuable household appliances, and each player will be entitled to the prize of his choice when he has accumulated enough points. All-expense trips to the World Series will also be awarded, and special cups and trophies will go to league winners at the end of the season.

SAS Cuts Sleeper Fare

Scandinavian Airlines System on Aug. 11 reduced its sleeper fare between New York and Europe to $45 above the regular plane fare. This compares with the $125 extra sleeper fee charged by other lines. Daily trans-Atlantic sleeper service in DC-6's is offered for first time by SAS.

NEW SERVICES

National Airlines expected to start serving Panama City, Fla., through the Bay County Air Field beginning about Aug. 15.

Wisconsin Central Airlines is now serving Land o'Lakes, Wis., using the King's Gateway Airport, with two northbound flights daily and one southbound.

National Airlines expects to begin serving Richmond, Va., and Baltimore on its Route 31 about Sept. 1.

United Air Lines will give Bradford, Pa., its first scheduled airline service on or about Sept. 1.

Share Ticket Offices: American Airlines and Western Air Lines are now sharing ticket office facilities at Beverly Hills, Pasadena, and Long Beach, Calif.

AF Leases 100 C-46's

The Air Force has now tentatively approved requests of 27 air freight carriers and scheduled airlines for leases of varying numbers of Curtiss C-46 cargo planes totaling 100 planes out of its stored reserve of between 400 and 500. The planes are leased to the carriers at the rate of $300 per month per plane.

Carriers which have signed leases and number of planes on lease are: Slick Airways, 10; Skyways and International Trading and Transport Co. of Miami, Fla., 6; U. S. Air Lines, of St. Petersburg, Fla., 5; Alaska Airlines, 6; Air Transport Associates of Seattle, Wash., 3; Aviation Corp. of Seattle, Wash., 3; Continental Charters, Inc. of Miami, Fla., 2; Pan American Airways, 12; Condor Lines, Miami, Fla., 2; Freight-Air Inc. of Miami Springs, Fla., 2; Economy Airway Co., 1; All-American Airways, 3; Nationwide Air Transport Service of Miami Springs, Fla., 3; Miami Air Lines, Inc., 3.

Carriers which have been approved for leases but which do not yet have signed contracts are: Globe Freight Airlines, Inc. of Hartford, Conn., 3; Seattle Air Charter, Inc., 2; Strato-Freight, Inc. of Pittsfield, Mass., 2; American Air Transport, Inc. of Miami Springs, Fla., 2; Roscoe Turner Aeronautical Corp. of Indianapolis, Ind., 1.

The following carriers have requested leases for the number of planes indicated and indications from the Air Force are that the requests will be approved in the near future: Transocean Airlines of Oakland, Calif., 6; Northern Airlines, of Seattle, Wash., 6; NATS Air Transportation Service of Oakland, Calif., 5; Eagle Air Freight, of Burbank, Calif., 5; Transair, Inc. of New York, 1; Arctic-Pacific Inc. of Seattle, Wash., 1.

Joint Air-Motor Rates

In view of the fact that every shipment of cargo that moves once by air must move twice by truck before it reaches consignees, the Central States Motor Freight Bureau of Chicago, representing more than 850 truck lines serving most of the area east of the Mississippi and north of the Ohio River, has filed with the Interstate Commerce Commission four tariff ratings for motor truck traffic which has a prior or subsequent haul by air.

Effective Sept. 1, the ratings will make joint air-motor carrier transportation available to thousands of shippers and receivers not located directly at airport cities. The rates apply between all points served by the participating motor carriers as named in their tariffs, on the one hand, and the city cargo terminals of the points served by the air carriers specified, on the other.

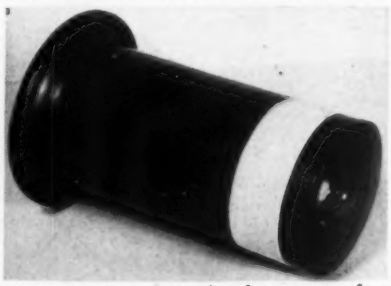
Only one through standard shipping document will be required for the acceptance or delivery of shipments moving partly by truck and partly by air, although the airlines' standard Airbill or the motor carriers' standard Bill of Lading will be exchanged by them at the point of actual interchange.

Hearings are being held looking forward to provision of similar arrangements in areas other than the central territory covered in the current filings. Ultimate aim of the certificated airlines, working through Air Cargo, Inc. is to provide a through service for air cargo, not only between airline points, but between all points in the United States.

Flying Figs—A few boxes of the initial shipment of 12,000 pounds of tree-ripened figs, which United Air Lines flew from Fresno, Calif., to Cleveland and New York, are displayed by Stewardess Carol Roos. UAL expects to transport 300,000 pounds to eastern markets during the next two months of the harvest season. The highly perishable fruit must be kept at about 45 degrees F. in flight, and refrigerated with special equipment while plane is on the ground.

Periscope Safety Eye

A specially constructed periscope manufactured by Douglas Aircraft Co. during the fire prevention modification of the DC-6 is used to examine the lower cargo compartments in the event of a fire signal from these areas.



Lights in the compartments are controlled from the cockpit and access panels in the cabin aisle flooring provide a means by which the barrel of the periscope extends the wide angle lens below the floor structure permitting visual verification of fire signals.

Operating manuals on the DC-6 airplane recommend checking with the periscope before releasing fire extinguishing agent into the compartments.

S & W Shows Profit

Seaboard & Western Airlines, a comparative newcomer in the air freight business, already has hung up records, trafficwise and financially.

From start of its flying operations as a registered irregular carrier of international air freight the latter part of May, 1947, to the end of the first quarter of 1948, S&W made a profit. Earned income before taxes was $10,034 at the end of its first fiscal year, Aug. 31, 1947, and for the seven-month period ending last Mar. 31, the company reported earned income before taxes of $11,209.

Traffic figures were even more impressive. During its first operational year, through May, 1948, S&W flew a total of 2,620,885 freight ton miles. This was more ton miles of freight than were flown last year by all the certificated U. S. international airlines combined.

To handle this volume, S&W used five C-54's and made a total of 224 flights across the North Atlantic. The company's planes logged more than 6,200 aircraft hours during the 12-month period, and fleet utilization averaged 6 hours 15 minutes per day. Cargo ranged from wearing apparel (about 44% of total volume) to heavy machinery, automobiles, small aircraft and livestock.

To Raymond A. Norden, S&W president, it seemed however that international air freight was still in its infancy.

"Its development thus far indicates an enormous potential, competing as it does against only one other means of transportation—surface ships," he said, adding: "It will grow beyond all current conception as shippers are educated to its advantages."

EAL Expands Cargo Fleet

Impressed with the growth of its cargo business, Eastern Air Lines is preparing to make a serious bid for even more of it. Four C-54's now being modified at the Douglas Aircraft plant in Santa Monica and scheduled for delivery by mid-September will boost Eastern's cargo capacity by over 2,000,000 pounds a month and triple the capacity of the present cargo fleet, which consists of one C-54 and two C-47's.

The new additions will feature a new tie-down technique in the form of a metal net developed by Eastern. The net will permit heavy and fragile packages to be separated so as to minimize crushing, and will also separate cargo by destination, expediting unloading on arrival.

Cargo Rule Extended: Authorization for scheduled non-certificated cargo carriers to operate under provisions of CAR Part 42 has been extended one year to Aug. 1, 1949 by special regulation 317-A.

U. S. Domestic Airline Revenues & Expenses for May

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
American	$ 7,939,060	$ 6,934,857	$ 424,944	$ 152,401	$ 336,712	$ 79,386	$ 2,348	$ 7,525,985	$ 3,591,070	$ 3,934,835	$ 413,154
Braniff	1,070,419	957,280	44,199	25,843	26,490	9,960	5,502	1,038,382	483,360	555,022	32,037
Capital	2,024,391	1,570,856	271,338	48,060	78,672	9,040	13,859	1,891,794	856,801	1,034,993	132,597
Caribbean	47,838	31,242	14,418	. . . .	1,270	179	150	49,858	20,492	29,366	-2,020
C & S	665,538	567,718	58,403	16,168	9,298	6,797	. . . .	661,290	277,726	383,564	4,248
Colonial	302,612	211,161	86,180	2,035	1,421	1,789	16	296,915	127,752	169,163	5,697
Continental	435,169	308,300	110,163	3,754	6,924	2,663	635	389,813	172,361	217,452	45,355
Delta	992,051	881,680	41,402	19,754	37,099	10,077	595	1,107,259	501,652	605,607	-115,208
Eastern	5,390,478	4,936,797	152,468	106,439	103,189	69,229	5,039	5,074,416	2,693,974	2,380,442	316,061
Hawaiian	326,471	284,143	2,097	12,217	20,660	6,525	648	318,834	132,944	185,890	7,636
Inland	183,277	128,592	49,698	1,996	1,645	993	. . . .	172,214	76,388	95,826	11,062
NCA	661,564	561,022	82,130	6,012	7,516	4,586	. . . .	590,188	257,295	332,893	71,376
National	567,525	479,009	49,059	11,735	11,561	8,948	. . . .	784,271	424,403	359,868	-216,746
Northeast	313,825	251,289	53,699	2,326	5,344	718	. . . .	420,551	195,957	224,594	-106,726
Northwest	2,001,877	1,776,843	119,335	46,908	39,046	14,349	1,453	2,098,899	947,337	1,151,562	-97,022
TWA	5,073,567	4,280,320	413,784	155,615	152,080	50,827	401	4,698,513	2,356,282	2,342,231	375,054
United	6,784,023	5,779,098	422,724	176,931	301,140	60,862	18,745	6,709,576	2,839,686	3,869,890	74,447
Western	643,170	527,629	46,680	8,571	15,342	4,527	15,280	718,918	295,649	423,269	-75,748
TOTALS	35,422,855	30,467,836	2,442,721	796,765	1,155,409	341,455	64,671	34,547,596	16,251,129	18,296,467	875,254

NOTE: These figures are taken from monthly reports filed by the airlines with CAB. The data are tentative and subject to later change.

U. S. Domestic Airline Traffic for May

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON MILES	EXPRESS TON MILES	FREIGHT TON MILES	TOTAL TON-MILES REV. TRAFFIC	AVAILABLE TON MILES FLOWN	** AVAILABLE TON MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	** SCHEDULED MILES COMPLETED
American	250,716	119,194,000	192,392,000	61.9%	686,126	465,745	1,797,553	14,443,058	27,238,908	53.0%	4,852,930	4,910,446	96.2%
Braniff	52,466	17,989,000	29,411,000	63.6%	74,096	76,861	109,239	1,985,087	3,576,546	55.5%	928,734	901,285	98.5%
Capital	101,390	27,363,000	54,384,000	50.3%	75,396	180,488	376,451	3,247,845	6,765,572	47.0%	1,609,129	1,664,243	96.8%
Caribbean	5,896	363,000	884,000	41.0%	471	. . . .	528	30,170	76,106	39.6%	11,307	13,232	100.0%
C & S	25,779	10,010,000	15,713,000	63.7%	37,209	49,593	51,584	1,098,855	2,037,370	53.9%	581,766	580,072	99.5%
Colonial	12,327	3,441,000	5,378,000	63.9%	6,286	4,510	2,894	360,133	719,870	50.0%	258,436	254,820	97.3%
Continental	15,426	5,639,000	10,095,000	55.8%	13,283	8,635	31,711	594,087	1,059,542	56.0%	489,735	471,634	99.7%
Delta	45,317	15,879,000	29,186,000	54.4%	69,018	68,492	180,770	1,844,768	3,909,138	47.1%	1,103,804	1,107,185	99.6%
Eastern	182,052	82,372,000	136,928,000	60.1%	338,817	296,792	534,966	9,317,173	19,304,602	48.2%	4,142,652	4,152,854	98.7%
Hawaiian	27,275	3,855,000	5,751,000	67.0%	3,495	11,830	39,629	377,134	660,410	57.1%	259,947	267,780	98.8%
Inland	6,302	2,299,000	3,870,000	61.0%	7,625	5,315	6,798	239,866	398,958	60.1%	196,337	197,780	99.0%
NCA	31,675	9,528,000	15,079,000	63.1%	24,640	17,835	27,192	982,525	1,561,888	62.9%	746,272	727,818	99.6%
National	13,802	7,759,000	21,817,000	35.5%	24,968	46,211	54,844	916,006	3,073,924	29.8%	473,080	478,530	97.6%
Northeast	21,842	4,198,000	9,269,000	45.2%	5,750	7,160	17,765	408,997	936,761	43.6%	277,690	321,069	84.8%
Northwest	59,194	31,107,000	49,617,000	62.6%	165,919	133,882	158,926	3,425,269	6,098,227	56.3%	1,472,919	1,484,404	98.5%
TWA	112,127	75,430,000	117,472,000	64.2%	658,123	497,645	777,463	9,188,504	14,473,106	63.4%	4,572,158	4,497,957	98.7%
United	177,600	107,018,000	153,798,000	69.5%	690,870	581,435	1,790,593	13,347,522	20,607,092	64.7%	4,982,297	4,947,294	97.5%
Western	25,235	9,747,000	16,665,000	58.5%	45,190	25,634	64,624	1,068,947	2,165,009	49.3%	554,401	528,932	99.0%
TOTALS	1,166,421	533,191,000	867,709,000	61.4%	2,927,286	2,458,063	6,023,530	62,875,946	114,683,029	54.8%	27,535,574	27,469,337	97.7%

NOTE: Final figures for Continental Air Lines, Month of April, 1948 — Revenue Passengers 12,932

U. S. Feeder Airline Revenues & Expenses for May

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
All American	$ 85,262	$	$ 83,976	$ 1,110	$	$	$	$ 94,143	$ 51,800	$ 42,343	$ -8,881
Challenger	Figures not yet available. Data will be included at a later date.										
Empire	63,884	19,664	43,297	104	. . . .	124	. . . .	70,012	36,104	33,908	-6,128
Florida	36,781	9,063	27,402	176	. . . .	52	. . . .	58,467	29,378	29,089	-21,686
Monarch	108,108	31,666	74,088	468	1,687	205	. . . .	118,184	65,349	52,835	-10,076
Piedmont	133,963	40,818	91,757	812	226	349	. . . .	145,976	79,480	66,496	-12,013
Pioneer	253,886	119,132	128,521	500	969	763	1,304	224,586	120,698	103,888	29,300
Southeast	186,881	74,519	108,064	693	2,036	559	706	190,385	103,814	86,571	-3,504
Trans-Texas	127,600	14,275	112,349	626	283	29	. . . .	90,311	42,000	48,311	37,290
West Coast	152,199	43,475	108,295*	406	. . . .	105	. . . .	110,768	53,216*	57,552*	41,431
Wis. Central	48,829	8,498	39,713	388	. . . .	88	. . . .	58,359	27,395	30,964	-9,530
TOTALS	1,197,393	361,110	817,462	5,283	5,201	2,274	2,010	1,161,191	609,234	551,957	36,203
					Helicopter Mail Service						
Los Angeles	68,216	. . . .	68,216**	. . . .	. . . .	. . . .	. . . .	26,551	16,820	9,731	41,665**

* Includes adjustments affecting prior periods.
** Includes $35,053 applicable to January-April, 1948 in accordance with CAB order E-1662 (retroactive to October 1, 1947).

NOTE: These figures are taken from monthly reports filed by the airlines with CAB. The data are tentative and subject to later change.

U. S. International Airline Traffic for May

Airlines	Revenue Passengers	Revenue Passenger Miles	Available Seat Miles	Passenger Load Factor	U. S. Mail Ton-Miles	Foreign Mail Ton-Miles	Express Ton-Miles	Freight Ton-Miles	Total Ton-Miles Rev. Traffic	Available Ton-Miles Flown	% Available Ton-Miles Used	Revenue Plane-Miles	Scheduled Miles	% Scheduled Miles Completed
American	5,388	4,058,000	8,491,000	47.7%	7,743	1,846	....	124,076	566,306	1,312,054	43.1%	203,633	221,902	87.8%
Amer. O'Seas	5,992	15,872,000	25,691,000	61.7%	104,954	11,154	131,283	....	1,955,893	3,448,895	56.7%	701,437	727,716	95.6%
C & S	848	581,000	1,880,000	30.9%	120	....	....	9,303	68,310	202,232	33.7%	41,785	42,470	98.3%
Colonial	1,462	1,148,000	2,494,000	46.0%	528*	237*	....	5,178	130,873	334,459	39.1%	57,842	57,304	100.0%
Eastern	1,211	1,259,000	3,611,000	34.8%	3,452	....	....	38,849	173,166	409,770	42.2%	64,480	64,480	100.0%
National**	1,750	561,000	1,648,000	34.0%	1,037	....	19,792	....	78,229	270,562	28.9%	35,836	35,836	100.0%
Northwest	2,150	4,043,000	7,672,000	52.7%	114,356	10,921	5,527	107,446	660,680	1,236,716	53.9%	331,615	332,717	99.7%
Panagra	7,371	8,577,000	15,268,000	56.1%	17,610	23,777	164,740	4,980	1,194,101	2,062,783	55.9%	480,917	478,689	97.6%
Pan American														
Latin Amer.	50,795	45,112,000	88,240,000	51.1%	231,324	69,713	1,639,329	104,717	6,649,241	12,487,753	53.2%	2,464,343	2,467,600	98.3%
Atlantic	10,504	26,787,000	39,423,000	67.9%	195,759*	41,279	387,875	18,156	3,586,094	5,729,491	62.5%	1,136,896	1,110,876	94.0%
Pacific	6,915	21,522,000	32,019,000	67.2%	328,827	14,828	290,793	....	2,780,355	4,581,753	60.6%	1,301,812	1,283,339	98.8%
Alaska	3,135	3,001,000	7,144,000	42.0%	31,888	....	243,020	....	580,521	1,214,970	47.7%	223,761	211,117	99.9%
TWA	6,577	21,198,000	32,739,000	64.7%	184,065*	87,180	313,458	....	2,960,389	4,737,576	62.4%	933,873	932,101	99.5%
United	1,722	4,133,000	6,420,000	64.3%	32,984	....	12,583	....	471,427	684,314	68.8%	148,800	148,800	100.0%
TOTALS	105,820	157,852,000	272,734,000	57.8%	1,254,647	260,935	3,208,400	412,705	21,855,785	38,713,328	56.4%	8,127,030	8,112,947	97.5%

* In addition to mail ton miles the following international parcel post ton miles were listed: American Overseas 13,623; Colonial 62; FAA Atlantic Div. 14,709; TWA 25,769

** Revenue passengers, February, 1948 -- 345

NOTE: Data in above tabulations were compiled by American Aviation Publications from monthly reports filed by the airlines with the Civil Aeronautics Board. Figures for American Airlines include that carrier's service to Mexico but not to Canada; for C & S to Havana; Colonial to Bermuda; Eastern to Puerto Rico; National to Havana; Northwest to Orient, and United to Honolulu. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedures.

U. S. Feeder Airline Traffic for May

Airlines	Revenue Passengers	Revenue Passenger Miles	Available Seat Miles	Passenger Load Factor	Mail Ton-Miles	Express Ton-Miles	Freight Ton-Miles	Total Ton-Miles Rev. Traffic	Available Ton-Miles Flown	% Available Ton-Miles Used	Revenue Plane-Miles	Scheduled Miles	% Scheduled Miles Completed
All American	....	....	....	...	3,363	2,919	....	6,482	34,837	18.6%	153,697	159,120	96.5%
Challenger	1,752	464,000	2,558,000	18.1%	3,019	1,424	2,561	53,506	206,417	25.9%	121,816	128,650	94.6%
Empire	2,033	436,000	1,825,000	23.7%	2,104	964	....	39,400	132,879	29.6%	86,946	87,916	98.5%
Florida	1,197	164,000	533,000	30.7%	695	417	....	16,740	60,288	27.7%	68,900	68,975	99.8%
Monarch	2,526	609,000	2,608,000	23.3%	2,263	1,342	7,346	75,564	222,858	33.9%	144,884	152,346	95.1%
Piedmont	2,800	683,000	3,167,000	21.5%	1,738	1,467	758	69,423	321,304	21.6%	152,929	155,912	98.0%
Pioneer	8,800	2,312,000	7,066,000	32.7%	5,515	1,959	2,587	213,407	747,209	28.5%	293,821	295,066	99.1%
Southwest	8,460	1,513,000	4,301,000	35.1%	3,559	2,494	6,513	164,389	430,104	38.2%	204,816	208,778	97.6%
Trans-Texas	1,325	297,000	2,626,000	11.3%	1,625	1,101	337	27,604	227,722	12.1%	124,832	125,272	99.6%
West Coast	6,460	754,000	1,972,000	38.2%	1,067	957	....	68,473	194,695	35.1%	100,767	101,339	96.3%
Wis. Cent.	890	150,000	592,000	25.3%	952	970	....	16,068	59,333	27.0%	66,172	77,810	85.0%
TOTALS	36,243	7,382,000	27,248,000	27.0%	26,100	16,014	20,102	751,056	2,637,646	28.4%	1,519,580	1,561,184	96.9%
						Helicopter Mail Service							
Los Angeles	....	....	....	...	2,460	....	....	2,460	8,251	29.8%	26,530	27,044	96.3%

U. S. Feeder Airline Revenues & Expenses for April

Airlines	Total Operating Revenues	Passenger Revenues	Mail Revenues	Express Revenues	Freight Revenues	Excess Baggage Revenues	Non-Scheduled Transport Rev.	Total Operating Expenses	Aircraft Operating Expenses	Ground & Indirect Expenses	Net Operating Income
All American	$ 83,023	$	$ 81,685	$ 1,261	$	$	$	$ 92,621	$ 49,970	$ 42,651	$ -9,598
Challenger	Figures not yet available. Data will be included at a later date.										
Empire	140,858	16,355	124,187*	203	....	103	....	68,329	35,161	33,168	72,529
Florida	40,761	11,576	28,037	331	....	80	483	61,881	31,530	30,351	-21,120
Monarch	92,561	21,525	69,523	441	1,618	83	....	116,950	63,233	53,717	-24,390
Piedmont	78,021	24,497	53,046	100	170	207	....	83,601	41,859	41,742	-5,580
Pioneer	198,783	99,331	93,964	756	762	427	-187	183,090	99,057	84,033	14,994
Southwest	146,201	52,327	90,984	546	1,901	220	137	179,473	93,798	85,675	-33,273
Trans-Texas	118,511	12,003	105,895	402	176	21	....	92,073	47,967	44,106	26,439
West Coast	78,236	39,113	38,665	484	....	86	....	104,352	50,357	53,995	-26,116
Wis. Central	43,711	6,179	36,991	267	....	69	....	56,978	26,052	30,926	-13,267
TOTALS	1,019,966	282,906	722,977	4,791	4,627	1,296	433	1,039,348	538,984	500,364	-19,382
					Helicopter Mail Service						
Los Angeles	18,395	....	18,395	....	....	....	....	24,453	15,580	8,873	-6,058

* Includes retroactive mail pay of $92,376.

NOTE: These figures are taken from monthly reports filed by the airlines with CAB. The data are tentative and subject to later change.

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Classified Advertising

The rates for advertising in this section are as follows: "Help Wanted," "Positions Wanted," "Aircraft Wanted or For Sale," and all other classifications $1.00 a line, minimum charge $4.00. Estimate bold face heads 30 letters and spaces per line; light body face 40 per line; box numbers add two lines. Terms, cash with order. Forms close 20 days preceding publication date. Rates for display advertisements upon request. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1025 Vermont Avenue, NW., Washington 5, D. C.

POSITIONS WANTED

Airline Captain, 6900 hours, 3000 DC-4, 1800 DC-3, 1500 Lockheed, 500 (actual instrument); also, Veteran with considerable trans-oceanic experience, desires position with individual or company. Box No. 627, AMERICAN AVIATION, 1025 Vermont Avenue, N. W., Washington 5, D. C.

HELP WANTED

MANUFACTURERS REPRESENTATIVES WANTED—For expanding line of commercial and private aircraft ground service equipment. Texas and Southeast territories. Box No. 628, AMERICAN AVIATION, 1025 Vermont Avenue, N. W., Washington 5, D. C.

NWA Housing in Japan: Northwest Airlines personnel in Tokyo, living now in a palace, hope to be settled by late fall in modern American-type houses. Work was started last month on a 20-unit housing project under a contract between Northwest and the International Tourist Corporation. Native labor is being used, and materials that are scarce or unobtainable in Japan are being flown from the U. S. in company planes or shipped by surface transportation.

FOR SALE

DELUXE PASSENGER PBY-5A. EXCELLENT CONDITION, VERY LOW ENGINE TIME. PRICE $68,000. WRITE: Box No. 625, AMERICAN AVIATION, 1025 Vermont Avenue, N. W., Washington 5, D. C.

Lighter Mail Sacks: Post Office Dept. is ordering 350,000 new oxford weave cloth lightweight mail bags for use on both domestic and international air routes. Present bag and lock weighs about two pounds, which on larger airlines means that PO pays for two pounds miles just for the sack. New ones weigh less than one pound.

UAL Training Films: United Air Line's film library has reached new proportions with sixty-five 16 mm. and fifty-two other films now in use in training activities. United started using film for training purposes back in 1932 and the effectiveness of this medium prompted the introduction of films covering every phase of operations. Films are loaned to schools and colleges to aid in the air education of the nation.

WINGS OF YESTERDAY

25 Years Ago

Night flying on the Chicago-Cheyenne section of the transcontinental airway of the Air Mail Service was tentatively scheduled to begin Aug. 25, 1923.

●

The Pioneer Instrument Co. of Brooklyn, N. Y., produced a 50,000 ft. altimeter.

10 Years Ago

(In AMERICAN AVIATION)

The nation's airlines were laying elaborate plans for National Air Travel Week to be observed throughout the country Oct. 1-9, 1938, to commemorate successful completion of the first 10 years of passenger transportation by air.

●

Three aeronautical agreements, involving air navigation, reciprocal issuance of airman certificates, and reciprocal recognition of certificates of airworthiness for export, were completed between the U. S. and Canada on July 28, 1938, to be effective Aug. 1.

●

According to the Bureau of Air Commerce, there were 20,076 certificated pilots on July 1, 1938, compared with 16,578 on same date previous year.

LETTERS

Rates Award

To the Editor:

Your editorial "P. O. Flip-Flop" in the August 1 issue strikes me as rating an award for editorial excellence.

CLARENCE M. YOUNG
General Manager
Department of Airports
City of Los Angeles

To the Editor:

As one who has followed closely the development and accomplishments of the helicopter, I want to commend your straightforward editorial on helicopter mail service in the August 1 issue.

You have given a clear, factual presentation of the anomalous situation which now besets the public, the CAB and the industry. Your editorial is a testimonial not only to the helicopter but, moreover, to the alertness and initiative of *American Aviation*.

MONROE R. BROWN, Secretary
Helicopter Council
Aircraft Industries Association

On Flight Recorders

To the Editor:

We have noted with interest the articles on flight recorders which appeared in the June 15 and July 15 issues of *American Aviation*.

We appreciate that there have been many rumors which have resulted from the recent changes and the earlier contemplated changes in the CAB flight recorder regulation.

While we will not attempt to speak for other flight recorder manufacturers, we cannot agree that "present production models . . . (are) undependable and a continuous service problem." Nor that the CAB's decision was based on recognition of the "inadequacy of present day flight recording equipment." In the words of the CAB's Amendment 41-22 to the CAR, "It now appears that appropriate quantities of flight recorders are not available"—we cannot argue this point.

The CAB continues: "Moreover, the lack of information as to the dependability of those available makes it impracticable to enforce compliance with this requirement on the date specified." Based on our own experience with our recorder, this point might be debatable, but we shall concede it for the moment. In the eyes of the Board, the dependability of the units has not yet been proven, but neither is their undependability certain. If present units were known to be undependable there would be little point to the proposed service tests.

In the spring of 1947, we constructed two recorders similar to our engineering original development unit. These engineering prototypes were loaned to the airlines for familiarization testing and to enable us to de-bug the basic design before making our production design. These two units were used by American, Capital, Chicago & Southern, Delta, Eastern, National, Northwest and United Air Lines for short periods. More than 1000 hours of flight time were accumulated.

Minor malfunction did occur; changes were made in the production design to eliminate these difficulties. Thus, after one year of de-bugging tests, we felt certain that all major difficulties had been discovered and corrected. I can assure you that we would not have begun production had we had any doubts or had airline tests showed serious shortcomings of the design.

In the spring of this year, we brought through several hand-made production-design prototypes. One of these units has been installed on a UAL passenger DC-4. Unfortunately, the Kollsman altitude and acceleration production-design sensing heads were not yet available, so that we were forced to use, temporarily, standard indicating instruments with selsyn transmitters installed on their coverglass.

Some difficulty has been encountered with the acceleration sensing head; we have recently obtained one of the production-design Kollsman acceleration sensing heads which last week was sent to UAL as a replacement. We expect to have this unit in completely satisfactory operating condition shortly. This is the only GE production model in test, although an installation at American Airlines is now being planned.

We would be blind to reality to suggest that there will be no "bugs" in the GE recorder which will appear in service test or in actual service. However, we feel confident that any that do appear at this stage will be of a very minor nature, and that they will not affect the safety or direct airworthiness of the airplane. We fully expect the unit to give dependable service for a minimum of 500 hours with any attention, other than replenishing the chart paper supply, and we are hopeful that this period may exceed 1000 hours.

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(Editor's Note: Views in the flight recorder articles were those expressed to our staff members by airline personnel. Our policy is to avoid adding editorial comment in our news reporting. We erred in using the expression "production models" since true production models have not been in existence long enough to justify performance data.)

The Alarming Helicopter

(Editor's Note: The following excerpt from a letter received from a reader in South America offers an amusing sidelight on the cultural lag accompanying the rapid acceptance of the helicopter as an economic instrument throughout the world.)

We have had one of our helicopters in Brazil assisting the Brazilian government in combating a coffee plague which is threatening to destroy a sizeable portion of their coffee production.

An amusing incident happened during the transfer of the helicopter from Buenos Aires to Sao Paolo. While flying over a lonely stretch of beach in the area of the state of Santa Catalina, where there is very little communication, the helicopter was observed flying about 800 ft. high by the local constabulary, who immediately sent a telegram to the Sao Paolo police reporting an airplane accident that was about to happen.

The local sheriff, having never seen a helicopter before, stated that he had just observed an airplane which had lost its wings, its propeller was flying around on top of the airplane and he was sure that the machine was going to crash immediately and he was inaugurating a search to determine the locality of the crash.

C. J. TIPPETT
Trabajos Aereos y Representatives, S. A.
Buenos Aires, Argentina

BOOKS

Wings Around the World. By Capt. Burr W. Leyson. 190 pp. Ill. E. P. Dutton Co., New York. $3.00

As the story of the pioneering and development of Pan American World Airways, this volume is a fairly creditable product. But under the cloak of its sub-title, "The Story of American International Air Transport", the book is quite out of focus and falls far short of telling the real story of international air transport from the war period on to the present time.

Either Capt. Leyson has no real understanding of the technical achievements of American aircraft and American air leaders, or he purposely wrote a one-way book. His coverage of the field up to the war is good and on firm ground. But if this were to be the sole source of anyone's knowledge of America in the air internationally from the war period on, the reader would indeed be poorly informed. It's a superficial effort.

This Air Age

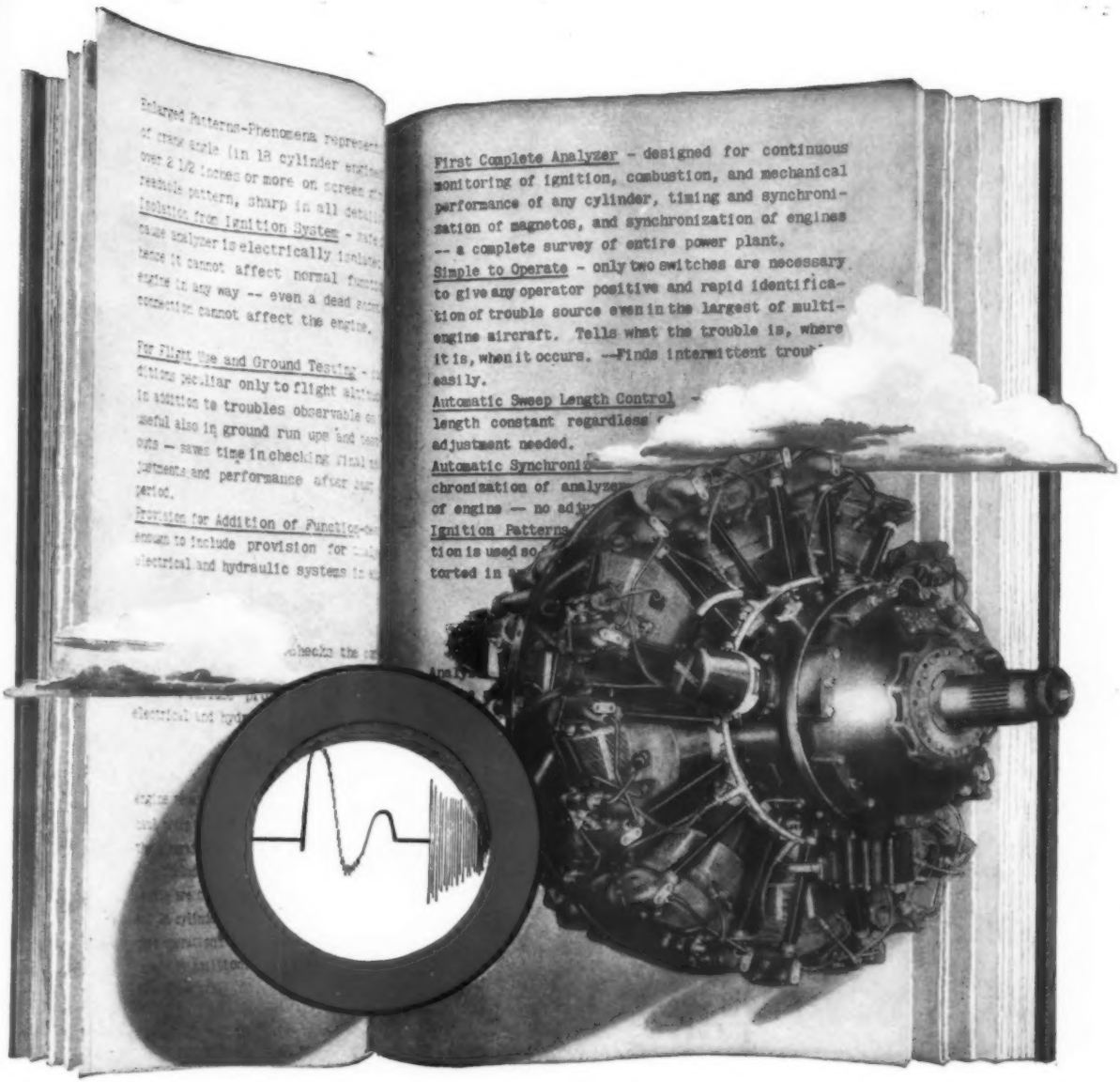
Trees: Some 65,000 trees have been flown from Norway to Iceland for a reforestation project.

Films: South African Airways has modified seven DC-4's for showing films in flight. Shorts and newsreels only will be shown.

Food: Qantas Empire Airways is freezing food at its base in Sydney, Australia, and shipping the frozen units to Singapore to cater to both Qantas personnel and to passengers on flights stopping at that point.

Altars: Portable altars are now provided for priests and missionaries by Sabena, Belgian Air Lines, on flights to the Belgian Congo. Services are held during a refuelling stop.

Wardrobe: A complete wardrobe, including nine suits, three sport jackets, two pair of slacks and two topcoats, was flown recently by Sabena to Haile Selassie I, emperor of Ethiopia.



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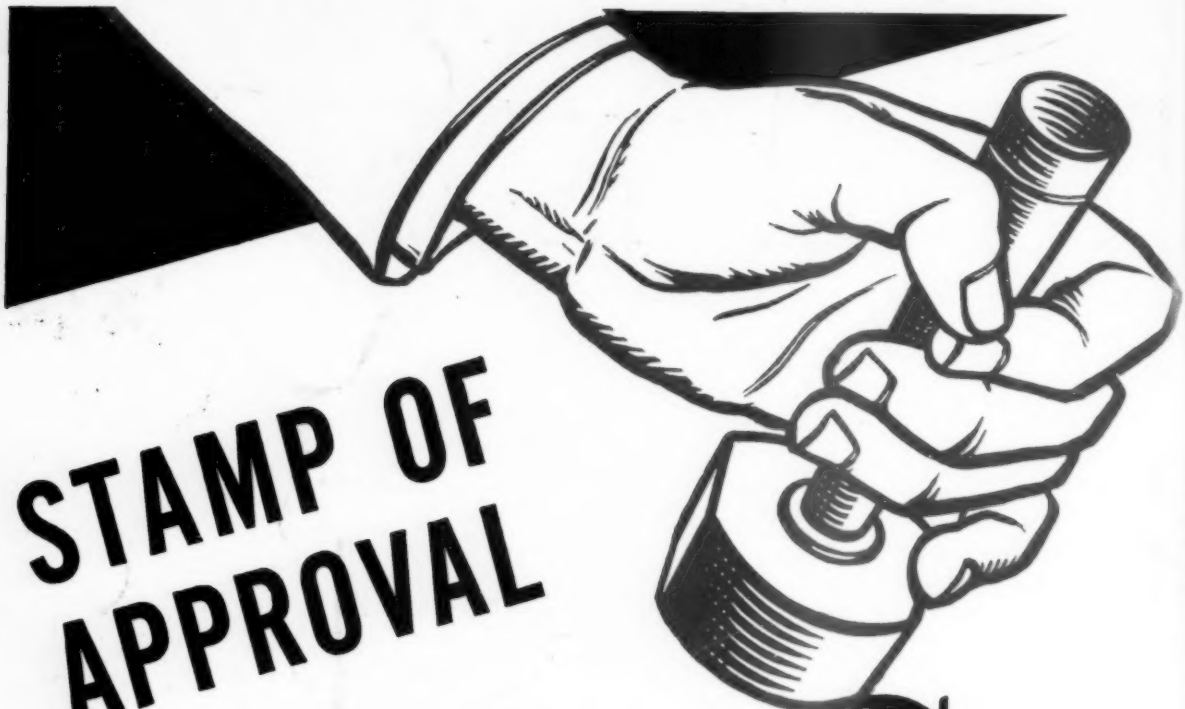

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